N00217_002561
HUNTERS_POINT_NS
SSIC 5000-33c

DRAFT FINAL SITE INSPECTION WORK PLAN, PRELIMINARY ASSESSMENT, OTHER AREAS/UTILITIES, VOLUME 3 OF 3 - 26 SITES

07/22/1992

HARDING LAWSON ASSOCIATES

Approved for public release: distribution unlimited.

July 22, 1992

DRAFT FINAL
SITE INSPECTION WORK PLAN: PA OTHER AREAS/UTILITIES
VOLUME III OF III: 26 SITES
NAVAL STATION TREASURE ISLAND
HUNTERS POINT ANNEX
SAN FRANCISCO, CALIFORNIA

DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN BRUNO, CALIFORNIA 94066-0727

A Report Prepared for

Installation Restoration Branch, Code 1811
Western Division
Naval Facilities Engineering Command
900 Commodore Drive, Building 101
San Bruno, California 94066

DRAFT FINAL
SITE INSPECTION WORK PLAN: PA OTHER AREAS/UTILITIES
VOLUME III of III: 26 SITES
NAVAL STATION, TREASURE ISLAND
HUNTERS POINT ANNEX
SAN FRANCISCO, CALIFORNIA

Contract No. 5086-90-057-004, CTO 140

HLA Project No. 11400 0506 (Job No. 18639,614.02)

by

Charles N. Atwood
Environmental Scientist

Michael G. Burns, R.G.
Associate Geologist

David F. Leland, P.E.
Associate Engineer

Harding Lawson Associates
7655 Redwood Boulevard
P.O. Box 578
Novato, California 94948
415/892-0821

Under Contract to:

PRC Environmental Management, Inc.
120 Howard Street, Suite 700
San Francisco, California 94105

July 22, 1992

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

LIST OF TABLES

LIST OF ILLUSTRATIONS

LIST OF EXHIBITS: PA SUMMARIES

1.0 INTRODUCTION

This document is the third volume of a Site Inspection (SI) Work Plan developed by Harding Lawson Associates (HLA) under contract to PRC Environmental Management, Inc. (PRC), on behalf of the Department of the Navy (Navy), Western Division (WESTDIV), Naval Facilities Engineering Command. The plan was prepared under Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract N62474-88-D-5086, Contract Task Order 0140 (CTO 140). This volume of the work plan describes SI activities to be performed at 26 preliminary assessment (PA) sites at the Naval Station, Treasure Island, Hunters Point Annex (HPA), San Francisco, California (Plate 1).

The three-volume Site Inspection Work Plan describes the SIs to be conducted at sites identified in the *Preliminary Assessment, Other Areas/Utilities* report (*HLA, 1990b*) (PA Other Areas/Utilities Report) and the Navy's response to regulatory agency comments on the report (*Department of the Navy, 1991*) included as Appendix A to this plan. Volume I addressed underground utilities (PA Sites PA-45 through PA-50); Volume II addressed sites for which analytical data are available (PA-19, PA-24, PA-32, PA-36, and PA-39); and this volume, Volume III, addresses sites for which analytical data are not available. The 26 PA sites discussed in this volume of the work plan and their associated buildings and areas are listed in Table 1; locations are shown on Plate 2. Navy responses to agency comments on the Draft SI Work Plan, Volume III, are included in Appendix B.

1.1 Work Plan Objective

This Work Plan has been prepared to assess existing site conditions in areas of HPA where review of historical information indicates past or present activities that may have resulted in releases of chemicals to the environment and where samples or analytical data representing surface and subsurface soil conditions, materials remaining onsite, or groundwater conditions are not available. This Work Plan recommends sampling and analysis in PA areas where release of chemicals to the environment may have occurred or where bulk unidentified materials remain onsite. Analytical results will assist in identifying areas where additional investigation of subsurface conditions or removal actions for bulk materials may be appropriate.

1.2 Work Plan Organization

This work plan is based on limited available information and a reconnaissance of each site. The text portion of the work plan describes the information reviewed, site reconnaissance procedures and general observations, the sampling plan rationale, the general analytical approach, field procedures to be used, and the report proposed to be prepared upon completion of the SIs. Following the text are exhibits presenting the sampling and analysis plans for the 26 PA sites. Each exhibit contains the following information:

- PA Site Number;
- Building/Area Number and Name;
- Historical Use;
- Current Use;
- Area(s) and Type(s) of Concern;
- Summary of Observations;

- Proposed Sampling and Analysis Plan, including proposed sampling locations, sample types, sample designations, and chemical analyses to be performed; and
- Site Map showing proposed sampling locations.

Exhibit and associated illustration (plate) numbers correspond to the PA site numbers. For example, Exhibit 23 is the exhibit for PA-23.

1.3 Previous Investigations

Analytical data do not exist for the PA sites discussed in this volume of the SI Work Plan. Proposed sampling locations and analytical approaches are based partially on historical information presented in ERM-West's fence-to-fence hazardous materials survey (*ERM-West, 1988*) and information presented in the Navy Response to Comments on the PA Other Areas/Utilities Report (*Department of Navy, 1991;* Appendix A). Tables in Appendix A include:

- Observations made during site visits in February and March 1991;
- Building lists identifying building use by the Navy; current tenant(s); chemicals inventoried by ERM-West (*1988*) and others; presence of containers, aboveground tanks, transformers, sumps, asbestos, and leaks/spills; and onsite observations;
- Grouping and prioritization of PA sites; and
- Proposed site inspection actions recommended by the Navy and the California Department of Health Services (DHS), which is now the California Department of Toxic Substances Control (DTSC).

2.0 SITE RECONNAISSANCE

At the 26 PA sites, conditions related to the potential for chemical releases to the environment were assessed during site visits conducted by HLA from September through December 1991. Site conditions at the time of the site visits are summarized in the exhibits. Conditions have changed at some sites since the previously recorded site visit observations listed in the Appendix A tables were made, resulting in some cases in modifications to previously recommended sampling schemes. Changes in site conditions and associated sampling recommendations are noted in the exhibits.

2.1 Site Access

Access to PA sites and buildings was arranged with security personnel at the HPA facility entrance. In most cases PA sites were accessible by automobile and buildings were open. Keys to locked buildings were obtained from the Installation Commanding Officer's building. No keys were available for Building 109 (PA-42), currently occupied by a travel agency, or Building 219 (PA-28), an electrical substation. Access to Building 281 (PA-28) was denied by a Department of Defense Redistribution Agency (DDRA) representative who stated that the building was off limits. In some cases, rooms within buildings were secured and inaccessible.

2.2 Reconnaissance Activities

After reviewing the PA Other Areas/Utilities Report (*HLA, 1990b*) and the Navy Response to Comments on the report (*Department of the Navy, 1991;* Appendix A), HLA staff conducted a reconnaissance of each site. Reconnaissance activities included visiting each building or area within a designated PA site, inferring historical chemical use on the basis of visual observations, assessing current chemical use, and evaluating evidence of actual or potential releases of chemicals to the environment. HLA personnel mapped,

photographed, and recorded observations at each site, focusing on sumps, pipelines, tanks, trenches, treatment equipment, storage areas, evidence of chemical releases to flooring, pavement, or soil, and areas in which use or disposal of hazardous materials or waste could have occurred. Although a sump is considered a waste collection reservoir having no outlet, because of obstructed vision and presence of liquid or solid contents in some instances, there was difficulty assessing whether some subgrade reservoirs are truly sumps. In any case, where there is uncertainty regarding the nature of subgrade reservoirs, contents of such reservoirs or soil beneath them are proposed for sampling.

2.3 General Observations

During site reconnaissance, HLA observed possible asbestos-containing material (ACM), unlabeled transformers, evidence of underground storage tanks, and paint that may contain heavy metals, especially lead. Based on historical information and visual clues, indications of the possible presence or former use of radioactive materials were noted. Investigation of such materials and features is not within the scope of this work plan; however, general observations are noted below.

2.3.1 Asbestos-Containing Materials

Possible ACM is present in most buildings. The material includes but is not limited to floor tiles, pipe insulation, boiler and furnace insulation, and exterior transite siding. An area of particularly poor housekeeping associated with an apparent ACM removal project was observed at Building 205 (PA-27). Possible ACM was also observed outdoors in miscellaneous rubble areas. Some of the suspected ACM is friable or damaged. Although a facility-wide ACM survey has been performed, collection and analysis of soil samples for asbestos is proposed at two locations noted during

reconnaissance visits: (1) PA-26, Area XIV and (2) PA-35, Area bounded by Manseau, Morell, and "E" streets.

2.3.2 Transformers

YEI Engineers, Inc. (*1989*), analyzed dielectric fluid samples from transformers and affixed labels indicating whether polychlorinated biphenyls (PCBs) were present. However, transformers potentially containing PCBs were observed in Buildings 157 (PA-26), 253 (PA-28), and 258 (PA-28); these transformers are not labeled and are not noted in YEI's report as having been sampled. Locations where PCB-containing transformers were removed from HPA are addressed as PA-51.

2.3.3 Underground Storage Tanks

An underground storage tank (UST) identification and removal program is in progress under the direction of PRC. Forty-five USTs have been identified and have been or are proposed to be removed or closed in place (*PRC, 1991b*). During PA site reconnaissance, evidence of five possible USTs not currently identified as part of the facility-wide UST-removal program was observed in or near Buildings 113 (PA-42), 146 (PA-23), Area XIV (PA-26), 211/253 (PA-28), 302 (PA-33), and 302A (PA-33). It is recommended that the additional USTs identified herein be included in the PRC identification and removal program.

2.3.4 Metal-Based Paint

Each inspected building is old enough to have been painted with metal-based paint. Lead is the metal of special concern. The condition of the paint in inspected buildings varies. Paint and soil from Buildings 304 (PA-33), 500 (PA-38), and 906 (PA-43) are recommended for sampling to establish the possibility of use of metal-based paint at HPA and the further possibility that paint chips have dropped

from building exterior walls to the soil, entered storm drains, or otherwise been released to the environment. These buildings were selected based on observations of paint peeling from walls and chips of paint laying on floors or soils beneath walls. The presence of lead or other metals in paint samples from these buildings may warrant more extensive sampling of surface coatings. Lead is a restricted hazardous waste that, if present in building materials, would subject these materials to specific disposal requirements in the event that buildings are demolished.

2.3.5 Radiation Survey

Based on building names and observations made during reconnaissance visits, the possible presence or previous use of radioactive materials will be investigated at Buildings 271 (PA-28), 364 (PA-33), 506/507/509/510 (PA-38), 816 (PA-41), and 113 (PA-42). These buildings and other suspect locations have either been investigated by PRC under the Surface Confirmation Radiation Survey (Phase I) or are being proposed for investigation in the upcoming Phase II Radiation Study.

3.0 GENERAL SAMPLING RATIONALE AND ANALYTICAL APPROACH

The rationale for proposed sampling locations and analytical testing is based on known or suspected historical processes and related chemical use, current chemical storage, and visible evidence of releases. The sampling locations and analytical program proposed for each PA site are presented in the exhibits. In general, sampling recommendations made in Tables 2 and 4 of Appendix A have been proposed in this plan; however, where conditions have changed since those recommendations were made, the recommendations have been modified to address current conditions. Such modifications are noted in the exhibits.

3.1 Sampling Rationale

The following types of samples will be collected:

- Materials in tanks, drums, sumps, and other bulk containers to characterize the materials for removal and proper disposal;
- Materials observed spilled on soil, pavement, or floors or along trenches or other surface migration pathways to drains;
- Solids or liquids in storm drains in areas where chemicals may have been released to storm drains. Only drains immediately adjacent to buildings will be sampled; other drains will be evaluated during the underground utilities SI activities (*HLA, 1991*);
- Sand-like materials suspected of being sandblast waste;
- Surface and subsurface soil; the numbers and depths of soil samples to be collected from borings are based on observations and estimates of the extent of releases; and
- Groundwater from monitoring wells installed in areas where evidence was observed of possible impact to subsurface soil or groundwater.

Each proposed sampling location is designated by a unique 7- or 8-character alphanumeric. The first four characters identify the PA site, e.g., PA23. The next one or two characters indicate the sample source, e.g., B for soil boring or SB for sandblast

material. The last two digits denote the sampling location within the PA site. Sampling location codes and symbols for sample types are presented on Plate 3.

3.2 Analytical Approach

The analytical approach for the samples collected during the SIs is based on the following: (1) the chemicals inventoried (see Table 3 of Appendix); (2) available site history information; (3) the potential for contamination to be present; (4) observations of releases to the environment; and (5) the need to characterize remaining wastes, e.g., materials in drums and sumps, for disposal. Because investigations have not been performed at these sites, the samples will in general be analyzed for a comprehensive suite of chemicals to evaluate whether or not hazardous materials are present. Most of the samples will be analyzed for:

- Contract Laboratory Program (CLP) volatile organic compounds (VOCs), EPA Test Methods 8010 and 8020 for soil, 601 and 602 for liquids;
- CLP semivolatile organic compounds (SOCs), EPA Test Method 8270;
- CLP PCBs and pesticides, EPA Test Method 8080;
- Priority pollutant metals plus barium, cobalt, molybdenum, and vanadium EPA Test Methods 6010, 7421, 7741, 7841, 7060, and 7470;
- Total petroleum hydrocarbons (TPH) as gasoline, EPA Test Method 5030;
- TPH as diesel and motor oil, EPA Test Method 3550, and;
- Total oil and grease (TOG), EPA Test Methods 9070 for liquids, 9071 for solids.

Groundwater will be analyzed for selected anions (including sulfate, nitrate, orthophosphate, and chloride) and for total dissolved solids (TDS), which are common groundwater quality indicators. Total alkalinity, turbidity, and pH of groundwater will be tested in the field. The pH of all liquids sampled will be measured using field pH

meters. Soil pH will be measured by the laboratory. All laboratory analyses will be performed by a laboratory certified by the State of California and approved by the Navy (through the Naval Energy and Environmental Support Activity [NEESA]) for the analyses requested.

Where the initial characterization of a material is relatively certain, the entire suite of analyses may not be performed. Where evidence of the use of chemicals not included in the general list of analytes is present, samples will be analyzed for the chemicals suspected of being present. The number of samples to be analyzed by each method is summarized in Table 2. Examples of these additional alternative analytical programs are discussed below.

Materials containing sand. Suspected sandblast materials, characterized as sand mixed with flecks of paint, polymer, or pigment, were observed in several areas as described in Exhibits 26, 28, 29, 31, 35, 44, and 57. The sandblast abrasive is believed to be composed of silica sand or pulverized rock and is assumed to be inert. The flecks of paint, pigment, or polymer are suspected to contain metals and semivolatile organics. Additionally, evidence of previous metal casting operations using sand molds is present. Cyanide was a common sand-mold polymer component. Because sandblast sand and sand-mold sand are visually indistinguishable, materials containing sand and suspected of being of sandblast or sand-mold origin will be analyzed for metals, SOCs, and cyanide. Storm drain content samples have been recommended in several areas where sand or sand-like materials were observed. Analytical detection limits for sandblast sand and storm drain content samples will be consistent with those in the Environmental Sampling and Analysis Plan Quality Assurance Project Plan (ESAP QAPjP; *ATT, 1991*).

Electrical batteries. Analyses for metals and acid-related compounds are proposed for samples from areas where vehicle batteries were observed. The batteries probably contain metals and acids, particularly lead and sulfuric acid; however, various metals or acids could have been used in battery manufacture. Therefore, analyses are proposed for metals, phosphate, sulfate, chloride, and nitrate.

Glycols. Glycols are common motorized-vehicle coolants. Samples from areas where automotive maintenance was performed will be analyzed for glycols, a hazardous material.

Pentachlorophenol (PCP). PCP was a common wood preservative. Therefore, PCP is a proposed analyte for samples from Building 141 (PA-26), where a possible wood-treating pressure vessel and UST are present, from PA-52, where the railroad right-of-way extends, and from PA-56, where a lumber loading operation once existed and railroad tracks are present.

Pesticides. Because Building 906 (PA-43) was once used as a garden shop, pesticides were probably present there at some time. Therefore, soil samples from this site will be analyzed for organochlorine pesticides, which are persistent in the environment.

Sodium. A sign on the wall above a now-dismantled dipping/cleaning operation in Building 280 (PA-29) reads "Trisodium Tank." Because a salt-like material has built up on the floor beneath this sign, analysis for sodium is proposed.

Asbestos. Discarded pipe insulation was observed in PA-26 Area XIV and in PA-35 within the area bounded by Manseau, Morell, and E streets. Asbestos remnants from a removal operation in Building 205 (PA-27) were observed on the floor of the building. Although an asbestos sampling investigation is underway in buildings at HPA,

samples of the materials observed in PA-26 and PA-35 are proposed to be collected for asbestos analysis.

Hydrazine. A hydrazine label was observed on a tank in Building 231 (PA-28). Residue has built up on the concrete floor beneath the tank. Therefore, analysis for hydrazine is proposed at this location.

Radiation. Samples collected in areas where use or disposal of radioactive materials are suspected will be screened in the field after collection and prior to submittal to the laboratory.

4.0 FIELD PROCEDURES

Field investigation procedures for the SIs may include one or more of the following activities:

- Conducting geophysical surveys for borehole clearance, tracing subsurface trenches and pipelines, and detecting USTs;
- Drilling and sampling of soil borings;
- Installing, developing, and sampling of groundwater monitoring wells; and
- Collecting samples of various matrices including surface soil, subsurface soil, residues on floors, suspected sandblast materials, and solid, semi-solid, and liquid materials in containers or storm drains adjacent to buildings.

These field activities will be conducted as generally described in the HPA Quality Assurance Project Plan (QAPjP) *(HLA, 1988b)*, in the HPA Site Safety Plan *(HLA, 1988a)*, and in Section 4.0 of the Group II Sampling Plan (*HLA, 1988c*). Field procedures, decontamination procedures, QA/QC procedures, and the Site Safety Plan are described below.

4.1 Geophysical Surveys

Surface geophysical methods will be used to clear all proposed borehole locations as described in the QAPjP (*HLA, 1988b*), Section 5.2. Additionally, various geophysical methods will be used to trace pipe and trench runs. Surveys will be conducted over soil, asphalt, and concrete and in buildings on concrete foundations. In each survey, the method order will be (1) electromagnetics EM31 or EM38, (2) ground penetrating radar (GPR), and (3) pipe and cable locators. The presence of chain-link fences, steel-reinforced concrete, or other metallic objects may reduce or disrupt electronic signals inherent in these methods, possibly rendering them ineffective. Effectiveness of the methods will be assessed on a case-by-case basis during the geophysical surveys.

4.2 Collection of Surface Soil Samples

Where surface soil samples (0 to 2 feet below ground surface [bgs]) are proposed, a 2.5-inch-diameter stainless steel hand sampler, hand auger, or hand trowel will be used. When concrete or asphalt is present, a coring machine will be used to remove such materials until soil is encountered. Samples will be collected in accordance with procedures in Section 7.1 of the QAPjP (*HLA, 1988b*).

4.3 Drilling and Sampling of Soil Borings

Soil borings will be advanced using a hollow-stem auger drill rig in accordance with the procedures described in Sections 6.1, 6.2, and 6.3 of the QAPjP (*HLA, 1988b*). Borings will be drilled to the approximate depth of the water table (an estimated 10 feet bgs). If auger refusal occurs, air percussion drilling methods will be employed. One to three soil samples will be collected for analysis from each boring. When one soil sample is proposed, it will be collected between 0 and 2 feet bgs. When two samples are proposed, they will be collected at 0 to 2 and approximately 5 feet bgs. When three soil samples are proposed, they will be collected at 0 to 2, approximately 5, and approximately 10 feet bgs. At monitoring well locations, additional soil samples will be collected immediately below the water table and at 5-foot intervals to the total depth of the well boring. Soil samples will be collected using a split-spoon sampler lined with stainless steel sample tubes as described in Section 7.2 of the QAPjP (*HLA, 1988b*).

At monitoring well locations, up to three soil samples collected above the water table (in accordance with the depth criteria detailed above) and one soil sample collected immediately below the water table will be submitted for laboratory analysis. Additional soil samples will be used for lithologic classification only. When groundwater is

encountered during the drilling and sampling of a boring, the depth at which saturated conditions are encountered will be recorded.

Borings will be backfilled with a mixture of neat cement and approximately 5 percent bentonite. The calculated and actual volumes of grout used for backfilling borings will be recorded. Soil produced during drilling operations will be containerized and properly disposed (as per Section 10.2 of the QAPjP [*HLA, 1988b*]).

4.4 Installation and Sampling of Monitoring Wells

At selected locations, single-cased groundwater monitoring wells will be installed to monitor groundwater in the uppermost aquifer. Monitoring well installation procedures and well construction methods are described in Sections 6.5 and 6.5.1 of the QAPjP (*HLA, 1988b*). Well borings will be advanced using a hollow-stem auger drill rig. The wells will be constructed of 4-inch-diameter polyvinyl chloride (PVC) screen and casing. The screen will extend from a maximum of 5 feet above the water table to either 15 feet below the water table or to the bottom of the shallow aquifer, whichever is less. The minimum depth of the surface seal will be 3 feet bgs; therefore, where groundwater is present at less than 8 feet bgs, the screen will extend less than 5 feet above the water table. The calculated and actual volumes of grout, bentonite, and filter pack material used for construction of the wells will be recorded.

Following installation, the wells will be developed as described in Section 6.6 of the QAPjP. One sampling round will be conducted at each site, and water levels will be measured in accordance with Section 9.1.1 of the QAPjP. Additional or continuous sampling may be proposed if analytical results from the initial sampling round indicate the presence of hazardous materials. Groundwater sampling procedures will be in accordance with Section 8.1 of the QAPjP. If free-phase product is encountered, the

thickness of that layer will be measured in accordance with Section 8.2 of the QAPjP. Drill cuttings and groundwater produced during monitoring well installation, development, and sampling will be containerized, sampled, and properly disposed (Section 10.2 of the QAPjP).

4.5 Collection of Floor Residue, Sandblast Material, and Bulk Samples

Samples of solid or semi-solid materials will be collected using stainless steel spoons or spatulas. Samples of residues on floors will be collected by scraping the residue away from the floor surface with a spoon or spatula and placing the material directly into a clean glass container. Samples of suspected sandblast materials and bulk samples will be spooned directly into clean glass jars. Sample containers will be sealed with Teflon™-lined lids, labelled, refrigerated, and transported to the analytical laboratory under chain of custody.

4.6 Collection of Liquid Samples from Containments

Liquid containment structures include sumps, drums, tanks, and trenches. Because the containment structures vary in dimension and type, no single sample procedure or sampling device is appropriate for all locations. Equipment that may be used includes disposable glass pipettes, Teflon™ or stainless steel bailers, and discrete depth samplers (e.g., Kemmerer bottles). Each containment will be sounded prior to sample collection to determine liquid depth. The appropriate sampling device will be selected on the basis of the configuration and depth of the containment structure and noted in the sampler's field log-book. Where stratification is observed or suspected, samples will be collected from each stratum, if possible, using discrete depth sampling devices.

Liquid samples will be transferred with minimum agitation and aeration from sampling devices into clean glass containers that will be filled completely. Samples to be analyzed for volatile organic compounds will be poured into 40-ml vials having Teflon™ septa. These vials will be filled and capped without headspace. Other liquid samples will be put into 1-liter or 1-quart amber glass containers with Teflon™-lined caps.

4.7 Sample Numbering System

Each sample will be assigned a unique 8-character identifier (e.g., 9215C042) and submitted blind to the laboratory. The first two characters represent the year the sample is collected (1992), the third and fourth represent the week of the year in which the sample was collected (15th week of 1992), the fifth is the designated letter of the sampler (sampling person C), and the remaining three represent the sequential sample number for the sampling person (C) taken over the life of the project (42nd sample taken at HPA by C). Sample location, medium, and depth will be recorded in the project record for cross reference.

4.8 Sample Compositing

Composite samples have been recommended in several instances where similarities in material matrix, color, or texture were observed, e.g., solid, gray, sandblast waste with visible paint flecks. Locations where composite samples are recommended are in specific exhibits.

Compositing of samples will be performed in the analytical laboratory. Solid matrix composites will be made from weight-proportioned aliquots, and liquid matrix composites will be made from volume-proportioned aliquots. Compositing will be

performed immediately prior to sample preparation or extraction to preserve sample integrity, and minimize the potential for loss of chemicals.

4.9 Decontamination Procedures

Decontamination of sampling and drilling equipment will be conducted by washing or steam cleaning (high pressure, hot water wash) in accordance with the procedures described in Section 10.1 of the QAPjP. Decontamination of all sample collection devices (e.g., bailers) will be conducted by washing with phosphate-free detergent and triple rinsing with distilled, deionized (DI), or clean water as appropriate. For those devices requiring a lowering line, new line will be used for each sample. The decontamination water will be containerized along with the liquids produced during well development and sampling; the combined fluids will be sampled and properly disposed (Section 10.2 of the QAPjP [*HLA, 1988b*]).

4.10 QA/QC Procedures

Quality assurance/quality control (QA/QC) procedures followed during the SIs will include calibration of field and laboratory equipment, analysis of field and laboratory QA/QC samples, and data reduction, validation, and reporting as described in Sections 12.0, 14.0, and 15.0 of the QAPjP (*HLA, 1988b*), respectively. Requirements for sample containers, handling, and preservation for soil and groundwater samples are summarized in Table 3. Proposed field QC samples are presented in Table 4. The required laboratory QA/QC samples are summarized in Table 5. The sample custody procedures defined in Section 11.0 of the QAPjP (*HLA, 1988b*) will be followed.

4.11 Site Safety Plan

A hazard potential analysis will be prepared for each PA site prior to the start of field work. The results of this analysis will be incorporated into site-specific safety plans that will identify potential safety hazards, personal protective equipment to be used, and safety monitoring procedures for each site. Standard health and safety procedures, described in the HPA Site Safety Plan (*HLA, 1988a*) and in the Health and Safety Program, Revision 1 (*PRC, 1991a*), will be followed.

4.12 Variance Documentation

In addition to documenting daily procedures and findings, as variations from the Work Plan are warranted because of new findings, changed conditions, or contamination more extensive than originally anticipated, documentation in field logs and Field Variance forms will be completed. Copies of Field Variance forms will be submitted to the agencies in accordance with existing protocols.

5.0 REPORT PREPARATION

Upon completion of the SI field investigation activities and evaluation of analytical data, a report will be prepared that (1) summarizes field activities and laboratory analyses performed, QA/QC procedures followed, and field observations and analytical results, (2) evaluates the results, and (3) recommends additional work if necessary. For each PA site this report will include the following:

- Summary of field data;
- Description of sampling methods if different from the QAPjP or this work plan;
- Boring logs and well construction diagrams;
- Tabulated analytical results;
- Presentation and evaluation of all QC data (i.e., all blanks, internal duplicates and their relative percent differences [RPDs], spikes and percent recoveries, field duplicates and their RPDs) with related calculations and control charts;
- Interpretation and evaluation of results; and
- Conclusions and recommendations.

Data evaluation may either lead to conclusions and recommendations for the inclusion of PA sites into IR investigations or to conclusions that environmental impacts associated with hazardous materials are not present and further action is not required. If sites are not recommended for inclusion in the RI program, a human health evaluation using risk assessment techniques will be prepared and included in the report to support any such recommendations.

6.0 REFERENCES

Aqua Terra Technologies, 1991. *Quality Assurance Project Plan for Environmental Sampling and Analysis Plan for Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* July 31.

Department of the Navy, 1991. *Navy Response to Comments Regarding the Preliminary Assessment, Other Areas/Utilities.* March 21.

EMCON Associates, 1987. *Area Study for Asbestos-Containing Material and Organic and Inorganic Soil Contamination, Hunters Point Naval Shipyard (disestablished), San Francisco, California.* July 2.

ERM-West, 1988. *Fence-to-Fence Hazardous Material Survey, Naval Station Treasure Island, Hunters Point Annex, San Francisco, California.* July.

Harding Lawson Associates (HLA), 1988a. *Work Plan Volume 5, Site Safety Plan, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* April 14.

_____, 1988b. *Work Plan Volume 3, Quality Assurance Project Plan, Remedial Investigation/Feasibility Study, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* May 27.

_____, 1988c. *Work Plan Volume 2B, Sampling Plan for Group II Sites, Remedial Investigation/Feasibility Study, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* November 15.

_____, 1990a. *Reconnaissance Activities Report, Remedial Investigation/Feasibility Studies, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* August 9.

_____, 1990b. *Preliminary Assessment, Other Areas/Utilities, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* October 19.

_____, 1991. *Site Inspection Work Plan: Other Areas/Utilities, Volume I of III: Underground Utilities, Naval Station Treasure Island, Hunters Point Annex, San Francisco, California.* Draft. December 20.

_____, 1992. *Site Inspections: Sites PA-16 and PA-18 and Remedial Investigation Work Plan: Site PA-18, Naval Station Treasure Island, Hunters Point Annex, San Francisco, California.* January 2.

PRC, 1991a. *Health and Safety Program, Revision 1.* April 5.

_____, 1991b. Telephone and facsimile communications between Scott Wald and Charles Atwood (HLA) regarding underground storage tanks considered for removal or closure program. December.

_____, 1992. *Naval Station Treasure Island, Hunters Point Annex, San Francisco, California, Internal Draft Summary Report.* May 6.

YEI Engineers, Inc., 1989. *Electrical Equipment Containing Oil, Master Inventory, Survey Report for Treasure Island Naval Station, Hunters Point Annex, San Francisco, California.*

TABLES

Table 1. PA Sites and Associated Building Numbers
Site Inspection Work Plan: 26 Sites
Hunters Point Annex

PA Site	Associated Buildings or Areas
23	146, 161, 162
25	134
26	157, Area XIV
27	205
28	211/253, 219, 230, 231, 258, 270, 271, 281
29	203, 217, 275, 279, 280, 282 Area bounded by Nimitz, Blandy, and C Streets
30	241
31	114
33	302, 302A, 304, 364, 411, 418
34	351, 366
35	274, 306, Area Bounded by Manseau, Morell, and E Streets
37	401, 423, 435, 436
38	500, 506, 507, 509, 510
40	527, Pier 2
41	816, 818
42	109, 113
43	906
44	438, Area near Buildings 408, 409, 410
51	Former Transformer Sites
52	Railroad right-of-way
53	525, 530
54	511A
55	307
56	Area VII, Railroad tracks
57	Drydock 4 Area
58	Scrap Yard across from Building 258

Sites PA-24, PA-32, PA-36, PA-39, PA-45, PA-46, PA-47, PA-48, PA-49, and PA-50 are addressed in Volumes I and II of the SI Work Plan.

Table 2. Summary of Proposed Analyses
Site Inspection Work Plan: 26 Sites
Hunters Point Annex

Acronym		Analysis	Number of Proposed Samples
TPH	-	Total Petroleum Hydrocarbons as Gasoline and Diesel	386
TOG	-	Total Oil and Grease	386
PCB	-	Polychlorinated Biphenyls	389
VOC	-	Volatile Organic Compounds	378
SOC	-	Semivolatile Organic Compounds	391
MTL	-	Metals	405
CN	-	Cyanide	45
SO_4	-	Sulfates	5
Cl	-	Chlorides	4
NO_3	-	Nitrates	4
PO_4	-	Phosphates	4
Na	-	Sodium	1
PCP	-	Pentachlorophenol	12
		Organochlorine Pesticides	3
		Glycols	8
		Hydrazine	1
A		Asbestos	2

Table 3. Sample Containers, Handling, and Preservation Protocols

Harding Lawson Associates

Sample Matrix	Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
Water/ Liquids	CLP VOCs	40 mL or 125 mL glass vial, Teflon-back septum	Two (2) or Three (3); vials filled completely, no air space	Cool to 4°C (ice in cooler) HCl to pH <2	10 days[1,2]
Water/ Liquids	TPH Gasoline	40 mL or 125 mL glass vial, Teflon-back septum	Two (2) or Three (3); vials filled completely, no air space	Cool to 4°C (ice in cooler) HCl to pH <2	14 days[2]
Water/ Liquids	CLP SOCs, CLP PCBs/Pesticides, PCP	1 liter amber glass bottle with Teflon-lined cap	Two (2); bottles are filled	Cool to 4°C (ice in cooler)	Extract within 5 days; analyze within 40 days[1]
Water/ Liquids	CLP Dissolved Metals	1 liter polyethylene bottle	One (1); bottle is filled	Nitric acid to below pH of 2 (approximately 2 mL concentrated HNO_3 per liter after field filtering with 0.45 micron filter); cool to 4°C (ice in cooler)	6 months (26 days for mercury)[1]
Water/ Liquids	CLP Cyanide	1 liter polyethylene bottle	One (1); bottle is filled	NaOH to pH>12; Cool to 4°C (ice in cooler)	12 days[1]
Water/ Liquids	TPH Diesel	1 liter amber glass bottle with Teflon-lined cap	Two (2); bottles are filled	Cool to 4°C (ice in cooler)	Extract within 7 days, analyze within 40 days
Water/ Liquids	Oil and Grease	1 liter amber glass bottle with Teflon-lined cap	Two (2); bottles are filled	Cool to 4°C (ice in cooler) H_2SO_4 to below pH of 2	28 days
Water/ Liquids	Major Anions	1 liter polyethylene bottle	One (1); bottle is filled	Cool to 4°C (ice in cooler)	NO_2, NO_3, orthophosphate, 48 hours; Cl, SO_4, 28 days

Table 3. Sample Containers, Handling, and Preservation Protocols (continued)

Sample Matrix	Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
Water/ Liquids	TDS	250 mL polyethylene bottle	One (1); bottle is filled	Cool to 4°C (ice in cooler)	48 hours
Water/ Liquids	Salinity	250 mL polyethylene bottle	One (1); bottle is filled	Cool to 4°C (ice in cooler)	14 days
Soil/ Bulk Solids	CLP VOCs, TPH Gasoline	Airtight completely full brass or stainless steel 4- or 6-inch long, 2.5-inch diameter tube or acid-washed 400g Mason jar	One (1)	Cool to 4°C (ice in cooler)	10 days for VOCs[1] 14 days for TPH
Soil/ Bulk Solids	CLP SOCs, CLP PCBs/ Pesticides, PCP	Airtight completely full brass or stainless steel 4- or 6-inch long, 2.5-inch diameter tube or acid-washed 400g Mason jar	One (1)	Cool to 4°C (ice in cooler)	Extract within 10 days; analyze within 40 days[1]
Soil/ Bulk Solids	TPH Diesel	Airtight completely full brass or stainless steel 4- or 6-inch long, 2.5-inch diameter tube or acid-washed 400g Mason jar	One (1)	Cool to 4°C (ice in cooler)	Extract within 14 days, analyze within 40 days

Table 3. Sample Containers, Handling, and Preservation Protocols (continued)

Harding Lawson Associates

Sample Matrix	Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
Soil/ Bulk Solids	Oil and Grease	Airtight completely full brass or stainless steel 4- or 6-inch long, 2.5-inch diameter tube or acid-washed 400g Mason jar	One (1)	Cool to 4°C (ice in cooler)	28 days
Soil/ Bulk Solids	CLP Metals, CLP Cyanide, pH	Acid-washed 400g Mason jar or airtight completely full brass or stainless steel 4- or 6-inch long 2.5-inch diameter tube	One (1)	Cool to 4°C (ice in cooler)	6 months, (26 days for mercury, 12 days for cyanide, ASAP for soil pH)[1]
Soil	Asbestos	Approximately 50 mL plastic jar	One (1)	NA	NA

Notes:

NA = Not applicable.

1: Holding time for CLP analyses calculated from the validated time of sample receipt (VTSR), i.e., the date on which a sample is received at the laboratory.

2: If groundwater samples effervesce with HCl preservation, HCl will not be added and the holding time will be 7 days.

ASAP = Analyze as soon as possible.

Table 4. Proposed Field QC Samples
Site Inspection Work Plan: 26 Sites
Hunters Point Annex

Proposed Analysis	Equipment Blanks	Trip Blanks	Duplicates
Total Petroleum Hydrocarbons as Gasoline and Diesel	19	19	19
Total Oil and Grease	19	0	19
Polychlorinated Biphenyls	19	19	19
Volatile Organic Compounds	19	19	19
Semivolatile Organic Compounds	19	19	19
Metals	20	10	20
Cyanide	2	2	2
Sulfates	0	0	1
Chlorides	0	0	1
Nitrates	0	0	1
Phosphates	0	0	1
Sodium	0	0	0
Pentachlorophenol	1	1	1
Organochlorine Pesticides	0	0	0
Glycols	1	1	1
Hydrazine	0	0	0
Asbestos	0	0	0

Field QC sample totals assume one field QC sample for every 20 environmental samples collected.

Table 5. Required Laboratory QC Samples*
Site Inspection Work Plan: 26 Sites
Hunters Point Annex

Analysis	Method Blank	Matrix Duplicate	Spike	Spike Duplicate	Blank Spike	Surrogate
CLP VOCs	R[1]	--[2]	R	R	--	R
TPH as gasoline	R	--	R	R	R	--
CLP SOCs	R	--	R	R	--	R
CLP Pest./PCBs	R	--	R	R	R	R
CLP Metals	R	R	R	--	R	--
Chromium VI	R	R	R	--	R	--
CLP Cyanide	R	R	R	--	R	--
PH as diesel	R	--	R	R	R	--
Total Oil & Grease	R	R	R	--	R	--
Major Anions	R	R	R	--	R	--
Asbestos	R	R	--	--	--	--
pH	--	R	--	--	--	--

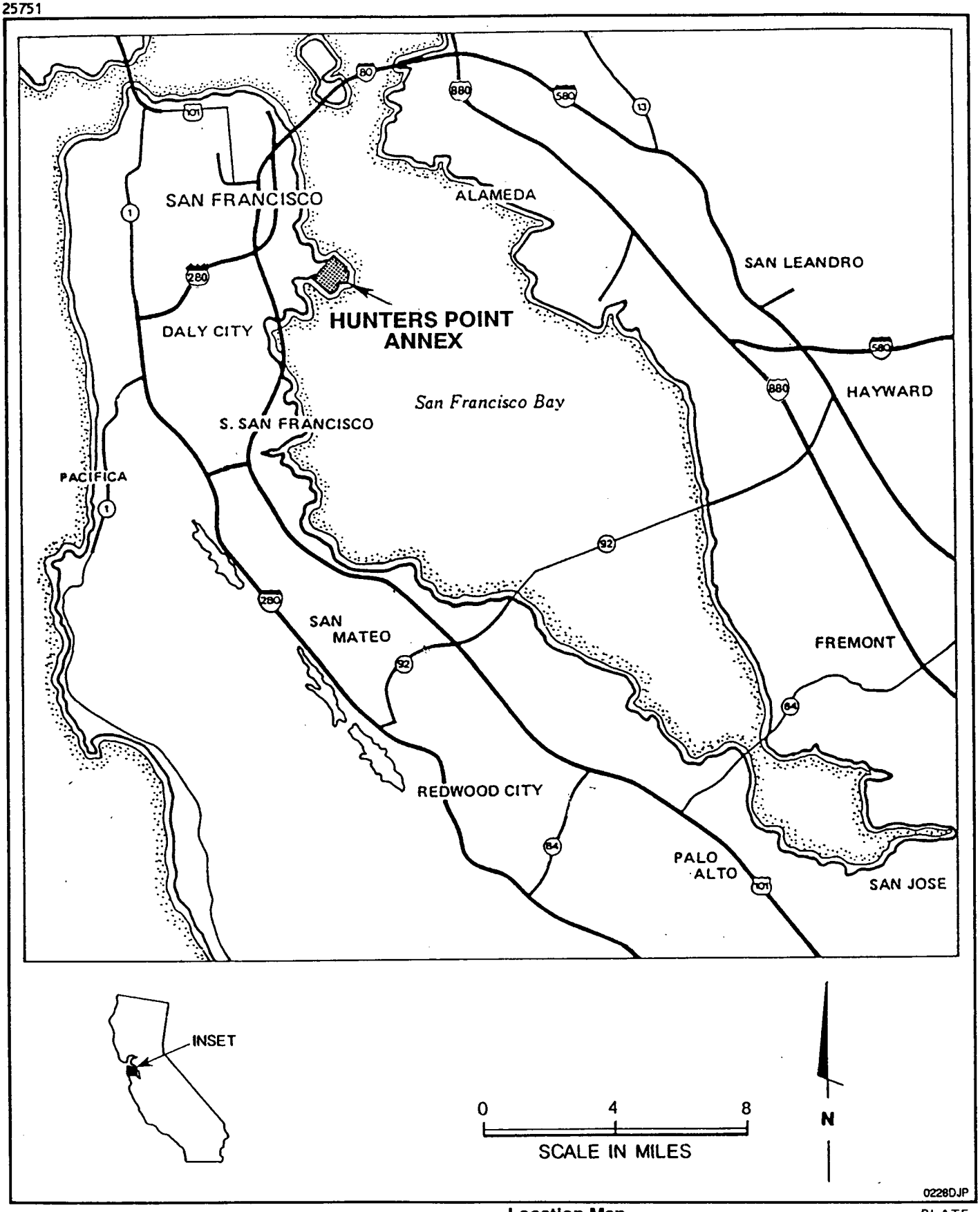
* The sample containers and handling and preservation protocols for laboratory QC samples are the same as those listed in Table 3. Volumes (number of containers) required for laboratory QC analyses for water samples are 2x the volumes (3x for CLP VOCs) stated in Table 3.

1 R = Required; minimum frequency is 1/20 samples. However, frequency of laboratory QC samples is dependent on the frequency of submittal and analysis; see CLP SOW and NACIP manual for specifics on frequency of laboratory QC analysis.

2 -- = Not required.

ILLUSTRATIONS

25751

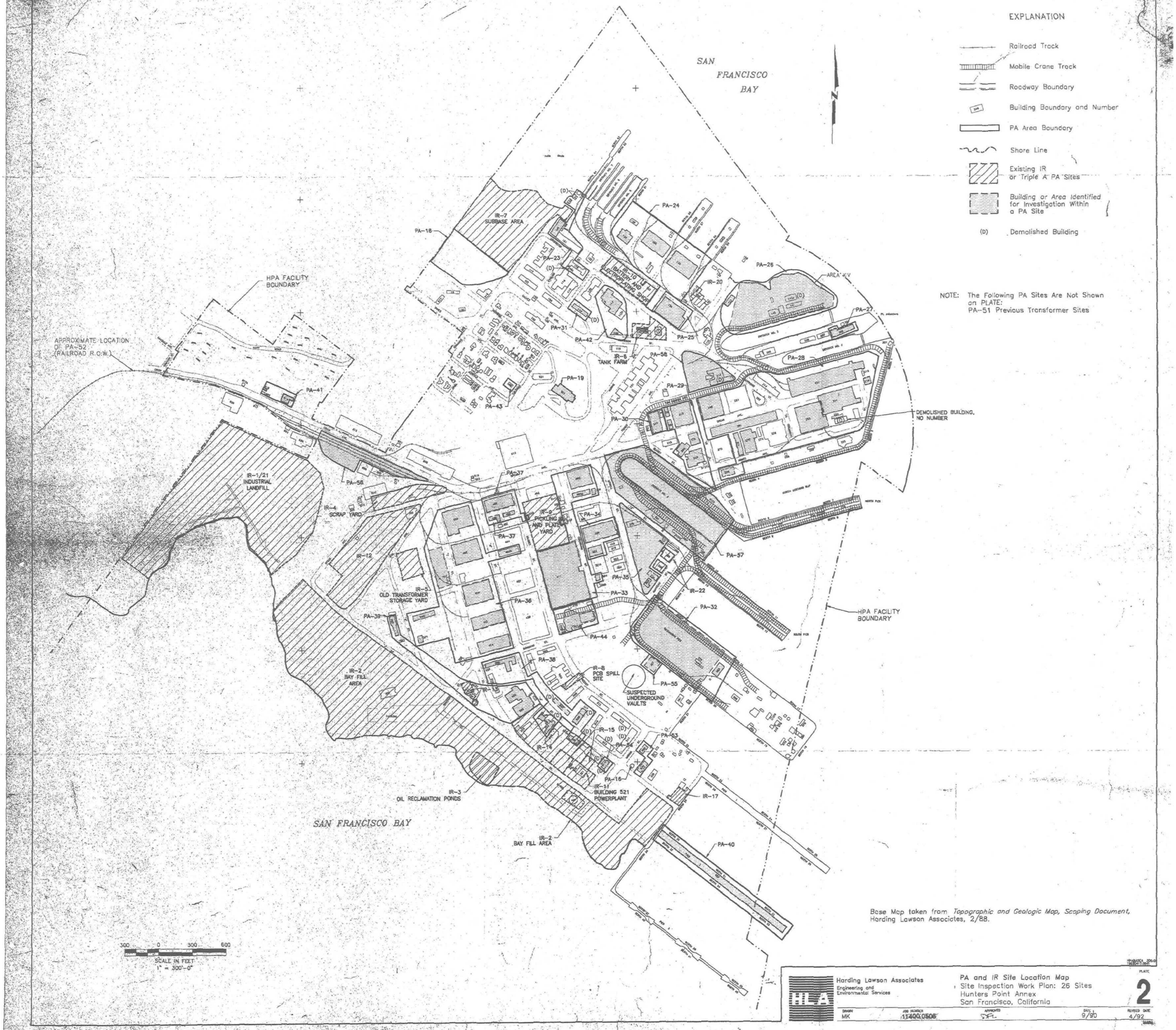


Harding Lawson Associates
Engineering and
Environmental Services

Location Map
Site Inspection Work Plan: 26 Sites
Hunters Point Annex
San Francisco, California

PLATE
1

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
DM	11400 0506	DFL	2/92	



Base Map taken from *Topographic and Geologic Map, Scoping Document*, Harding Lawson Associates, 2/88.

Harding Lawson Associates
Engineering and Environmental Services

PA and IR Site Location Map
Site Inspection Work Plan: 26 Sites
Hunters Point Annex
San Francisco, California

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
MK	11400.0506		9/90	4/92

PLATE 2

Plate 3a. Summary of Sample Types and Designations

Sample Type	Written Symbol	Graphic Symbol
Soil Boring	B	
Monitoring Well	MW	
Surface Soil	SS	
Floor Scrape	FS	
Bulk	BK	
Transformer	TF	
Drum	DM	
Tank	TK	
Trench	TA	
Sandblast Material	SB	
Sump	SU	
Storm Drain	SW	
Floor Drain	FD	
Asbestos	A	

Designations used in the Exhibits for sampling include the PA site number, a 1- or 2-letter symbol as defined above, and a 2-digit number. An example is "PA28SU16", where "PA28" is the site PA area number, "SU" refers to a sump sample, and "16" is the sixteenth sample proposed in PA-28. Graphic symbols are used on plates in the Exhibits. In cases where composite samples are proposed, the identical sample designation may appear more than once on the associated PA-area plate.

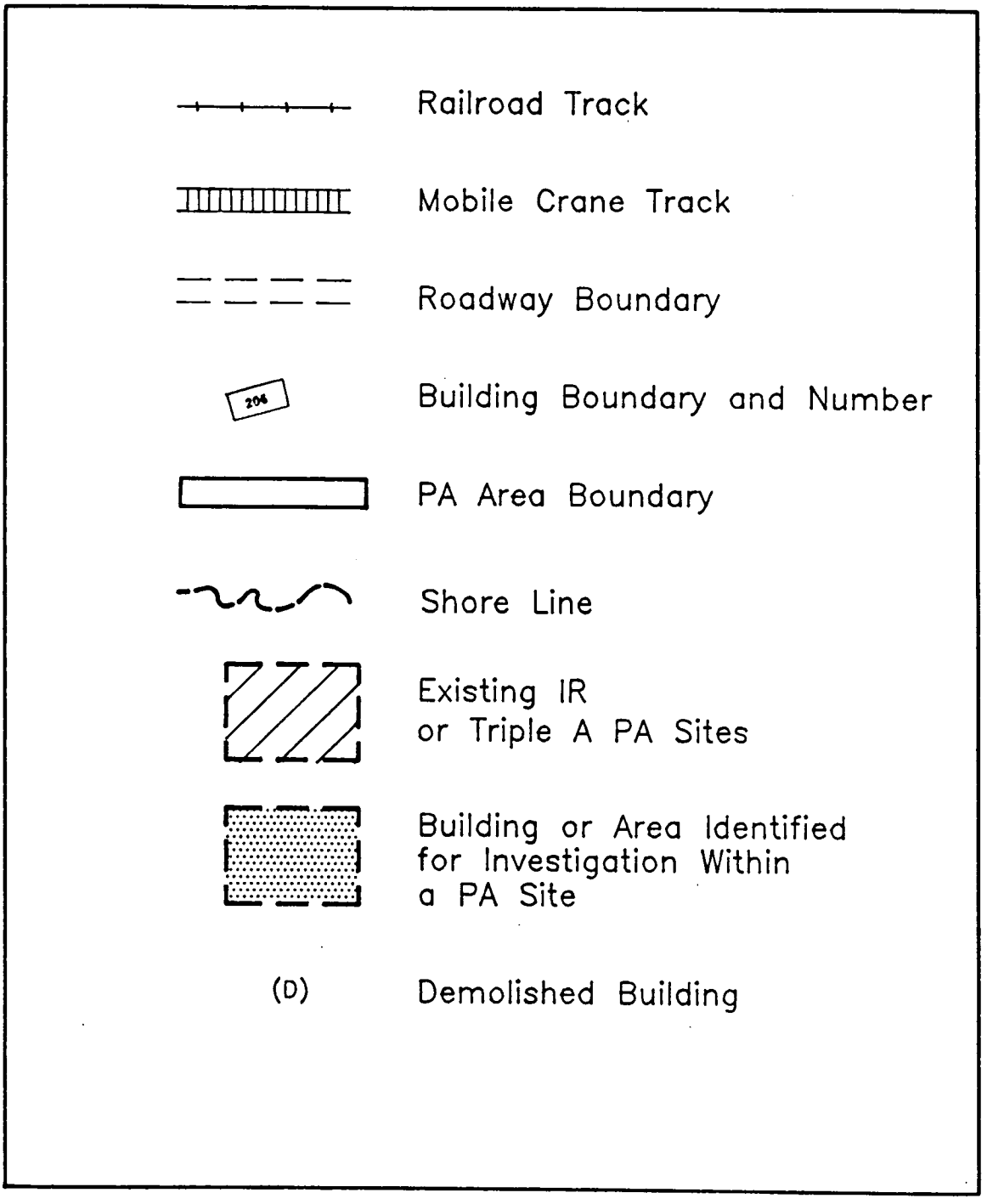
SYMBOLS 1.0
19920305.0952

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Summary of Sample Types and Designations
Site Inspection Work Plan: 26 Sites
Hunters Point Annex
San Francisco, California

PLATE **3a**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
MK	11400 0506	DFL	3/92	



Harding Lawson Associates
Engineering and
Environmental Services

Plate Explanation
Site Inspection Work Plan: 26 Sites
Hunters Point Annex
San Francisco, California

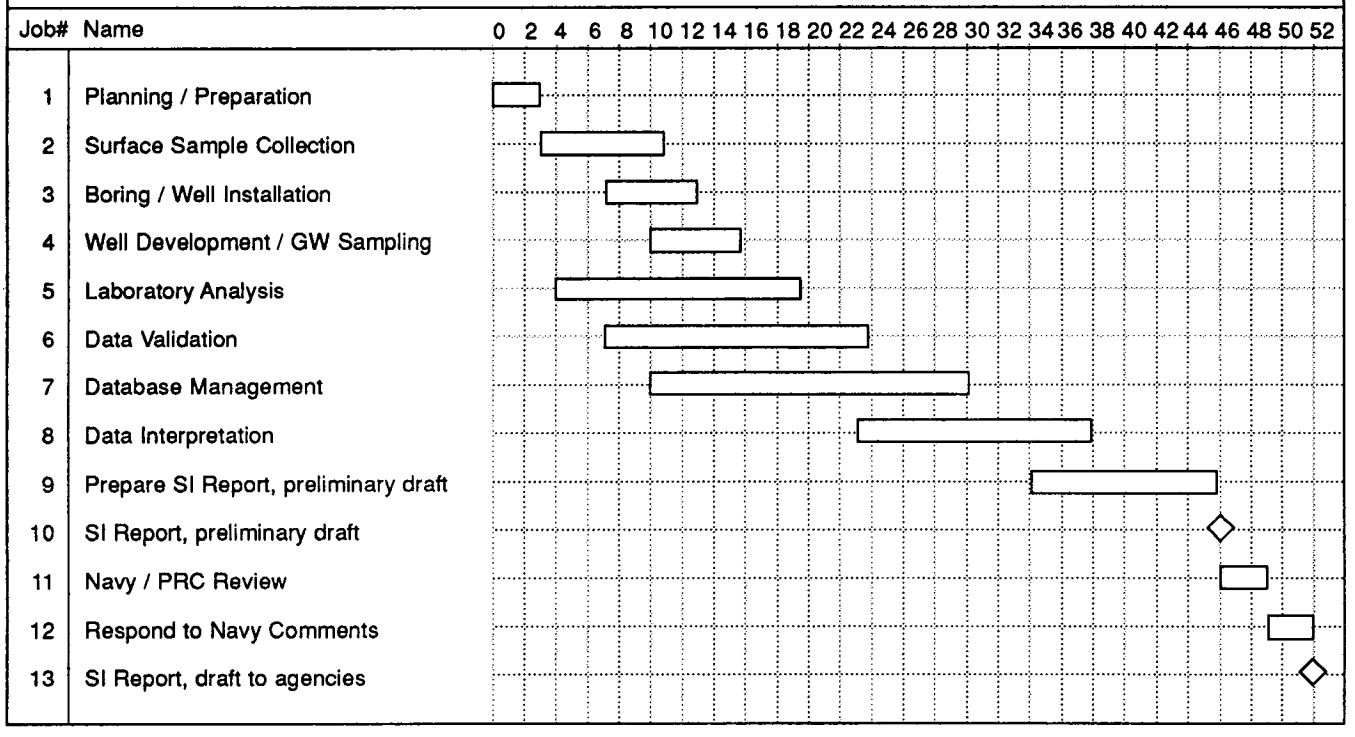
PLATE
3b

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
MK	11400 0506	CNA	3/92	

SITE INSPECTION SCHEDULE

PROJECT: SI Work Plan, Volume III

CURRENT DATE: 03/19/92



Harding Lawson Associates
Engineering and
Environmental Services

Site Inspection Schedule
Site Inspection Work Plan: 26 Sites
Hunters Point Annex
San Francisco, California

PLATE **4**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
DJPc	11400 0506	CWA	3/92	

EXHIBITS

PA: 23

BUILDING/AREA: 146

BUILDING/AREA NAME: TACAN Facility, S-67

HISTORICAL USE: Photograph development laboratory

CURRENT USE: Storage area for onsite monitoring well installation contractor

AREA/TYPE OF CONCERN: Possible UST, 2 petroleum aboveground storage tanks (ASTs), paint resins on soil

SUMMARY OF OBSERVATIONS:

Several fume hoods on the first and second floors indicate historical chemical use. Two floor plates, unmovable without proper equipment, were identified in the northwest part of the building. A fuel pump observed at the north exterior corner indicates the probable presence of UST beneath the pavement nearby. Two aboveground storage tanks (ASTs), assumed to have stored diesel and heating oil, are located in secondary containment at the northeast corner. Dispensing hoses from these tanks, however, are not contained and spillage to an adjacent storm drain is apparent. Three ground-level compartments with sealed lids at the south corner have paint or resin surrounding them. Surface stains are present on the asphalt along the northwest exterior of the building.

PROPOSED WORK PLAN:

Task 1 Collect and analyze samples as below:

Task 2. Lift floor plates to assess what is beneath them. Collect appropriate samples if warranted.

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
AST contents	PA23TK01	1	1	1	1	1	1	
AST contents	PA23TK02	1	1	1	1	1	1	
Storm drain beneath dispensing hoses	PA23SW03	1	1	1	1	1	1	
Soil beneath paint/resin at south exterior corner	PA23SS04	1	1	1	1	1	1	
Soil beneath oil stains on north side	PA23SS05	1	1	1	1	1	1	
TOTAL ANALYSES		5	5	5	5	5	5	

EXHIBIT 23
(Continued)

PA: 23

BUILDING/AREA: 161

BUILDING/AREA NAME: Maintenance Service Center, S-07

HISTORICAL USE: Unknown

CURRENT USE: Demolished

AREA/TYPE OF CONCERN: None observed

SUMMARY OF OBSERVATIONS:

The building site is a soil-covered area similar to surrounding areas. No indications of spills or releases were observed. The building name suggests the possible previous use/storage of hazardous materials.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Composite 3 surface soil samples	PA23SS06	1	1	1	1	1	1	
TOTAL ANALYSES		1	1	1	1	1	1	

PA: 23

BUILDING/AREA: 162

BUILDING/AREA NAME: Paint Storage, S-71

HISTORICAL USE: Unknown

CURRENT USE: Demolished

AREA/TYPE OF CONCERN: None observed

SUMMARY OF OBSERVATIONS:

The building is no longer present, and the site is now a boat ramp. Soil formerly beneath the building has been removed; therefore, no sampling is recommended.

PA-24

125

DRYDOCK NO. 5

DRYDOCK NO. 6

DRYDOCK NO. 7

BERTH 64

123

113A

113

IR-10

PA-42

LOCKWOOD STREET

122

120

PA-31

PA-23

114(D)

119(D)

145(D)

162(D)

161(D)

PA23SS06

115

144

PA23TK01

PA23TK02

PA23SW03

TANKS

121

116

146

PA23SS04

PA23SS05

ENGLISH ST.

IR-7

104

105

106

118

117

103

150

GALVEZ AVENUE

102

India Basin

0 100 200

SCALE IN FEET

HPAH0201 100.0
19920316.1632

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-23
Hunters Point Annex
San Francisco, California

PLATE
PA-23

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CWH	10/91	3/92

PA: 25

BUILDING/AREA: 134

BUILDING/AREA NAME: Machine Shop and Q & RA; Offices, S-06, 38

HISTORICAL USE: Cal Marine Works Machine Shop

CURRENT USE: Odaco Refrigeration Machine Shop and Storage

AREA/TYPE OF CONCERN: Sumps, drums, dip tank, machine rooms

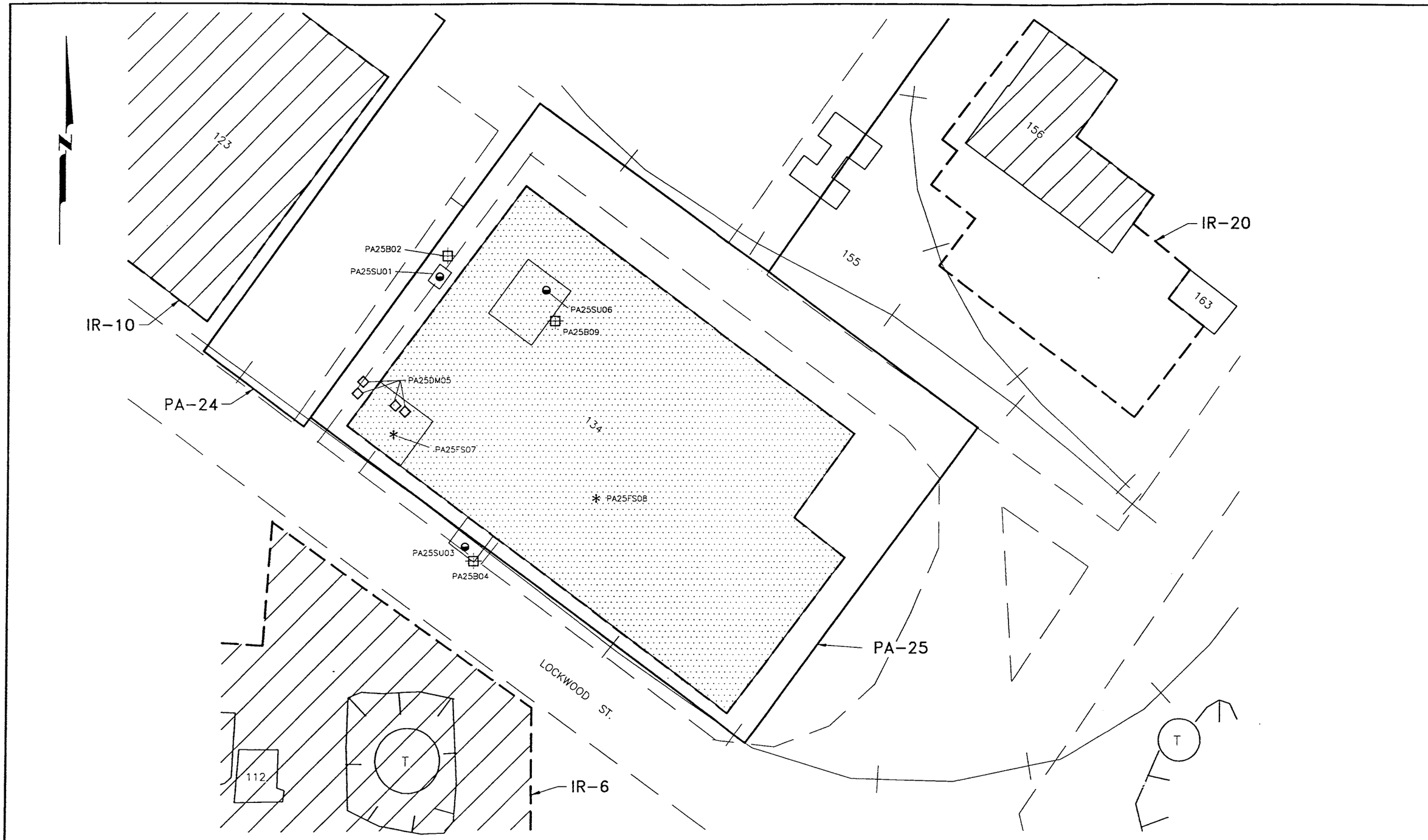
SUMMARY OF OBSERVATIONS:

A large concrete dip tank/degreasing vat labeled "chlorinated materials" built into the foundation drains to a sump that is partially inside and partially outside the building. The tank contains sludge, and the sump contains liquid. Pools of standing oil were observed on the concrete floor near and under machines. The floor tile in one machine room is saturated and deformed by apparent oil and corrosive material.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Outside Sump #1	PA25SU01	1	1	1	1	1	1	
Soil beneath Sump #1	PA25B02	2	2	2	2	2	2	
Outside Sump #2	PA25SU03	1	1	1	1	1	1	
Soil beneath Sump #2	PA25B04	2	2	2	2	2	2	
Composite of 4 55-Gal Drums	PA25DM05	1	1	1	1	1	1	
Dip Tank/Degreasing Vat	PA25SU06	2	2	2	2	2	2	
Stained Tile	PA25FS07	1	1	1	1	1	1	
Machine Shop Oil Composite	PA25FS08	1	1	1	1	1	1	
Soil adjacent to dip tank	PA25B09	1	1	1	1	1	1	
TOTAL ANALYSES		12	12	12	12	12	12	



HPAH0202 50.0
19920316.0833

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-25
Hunters Point Annex
San Francisco, California

PLATE
PA-25

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNH	10/91	3/92

PA: 26

BUILDING/AREA: 157

BUILDING/AREA NAME: Q & RA Industrial Lab, Metal Fabrication Branch

HISTORICAL USE: Fabrication of metal products, welding, nondestructive testing lab

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Oily sludge and stained soil, transformer, storm drain sediment

SUMMARY OF OBSERVATIONS:

The interior of the building is covered by a concrete and asphalt floor. A thin veneer of soil covers the asphalt and a storm drain is located near the center of the asphalt area where some staining was observed on the soil. A workbench area with a small fumehood is on the southeast wall. An overturned drum surrounded by stained soil and oily sludge is outside the building on the southeast side.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil stain at overturned drum	PA26B01	1	1	1	1	1	1	
Composite of oil stains on floor	PA26SS02	1	1	1	1	1	1	
Storm drain sediment	PA26SW03	1	1	1	1	1	1	CN
TOTAL ANALYSES		3	3	3	3	3	3	

PA: 26

BUILDING/AREA: Area XIV

BUILDING/AREA NAME: Area XIV

HISTORICAL USE: Carpentry or Carpenters' shop, drydock work, painting, sandblasting, repair

CURRENT USE: Not in use.

AREA/TYPE OF CONCERN: Drums containing oil, possible UST, sandblast material

SUMMARY OF OBSERVATIONS:

Locations visited in this area included Building 141, Dock Shipwright's Shop S-64; area where Building 142A once stood, Air Raid Shelter; Building 140, Pumphouse for Drydock 3.

Sandblast material was observed in several locations. Storm drains likely contain sandblast material and other sediments. A pressure cylinder and an associated UST possibly used for wood treatment are adjacent to Building 141. Debris suspected of containing asbestos materials is present along the shoreline.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Storm drain	PA26SW04	1	1	1	1	1	1	CN
Storm drain	PA26SW05	1	1	1	1	1	1	CN
Sandblast material composite	PA26SB06					1	1	CN
Surface soil under wood treatment cylinder	PA26SS07	1	1	1	1	1	1	PCP
Soil near suspected asbestos material	PA26AS08							A
TOTAL ANALYSES		3	3	3	3	4	4	

N

HPA FACILITY BOUNDARY

PA-26

AREA XIV

PA-27

133

157

142A(D)

141

140

204

205

207

208

PA26AS08

PA26SB06

PA26BQ01

PA26SW03

PA26SS02

PA26SW04

PA26SS07

POSSIBLE UST

PA26SW05

DRYDOCK NO. 3

0 100 200

SCALE IN FEET

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-26
Hunters Point Annex
San Francisco, California

PLATE
PA-26

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

HPAH0203 100.0
19920316.0838

EXHIBIT 27

PA: 27

BUILDING/AREA: 205

BUILDING/AREA NAME: Pump and Compressor Plant-PD2, S-03

HISTORICAL USE: Boiler House/Steam Generation, Pumphouse for Drydock

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Asbestos, lubricating oil, dielectric fluid

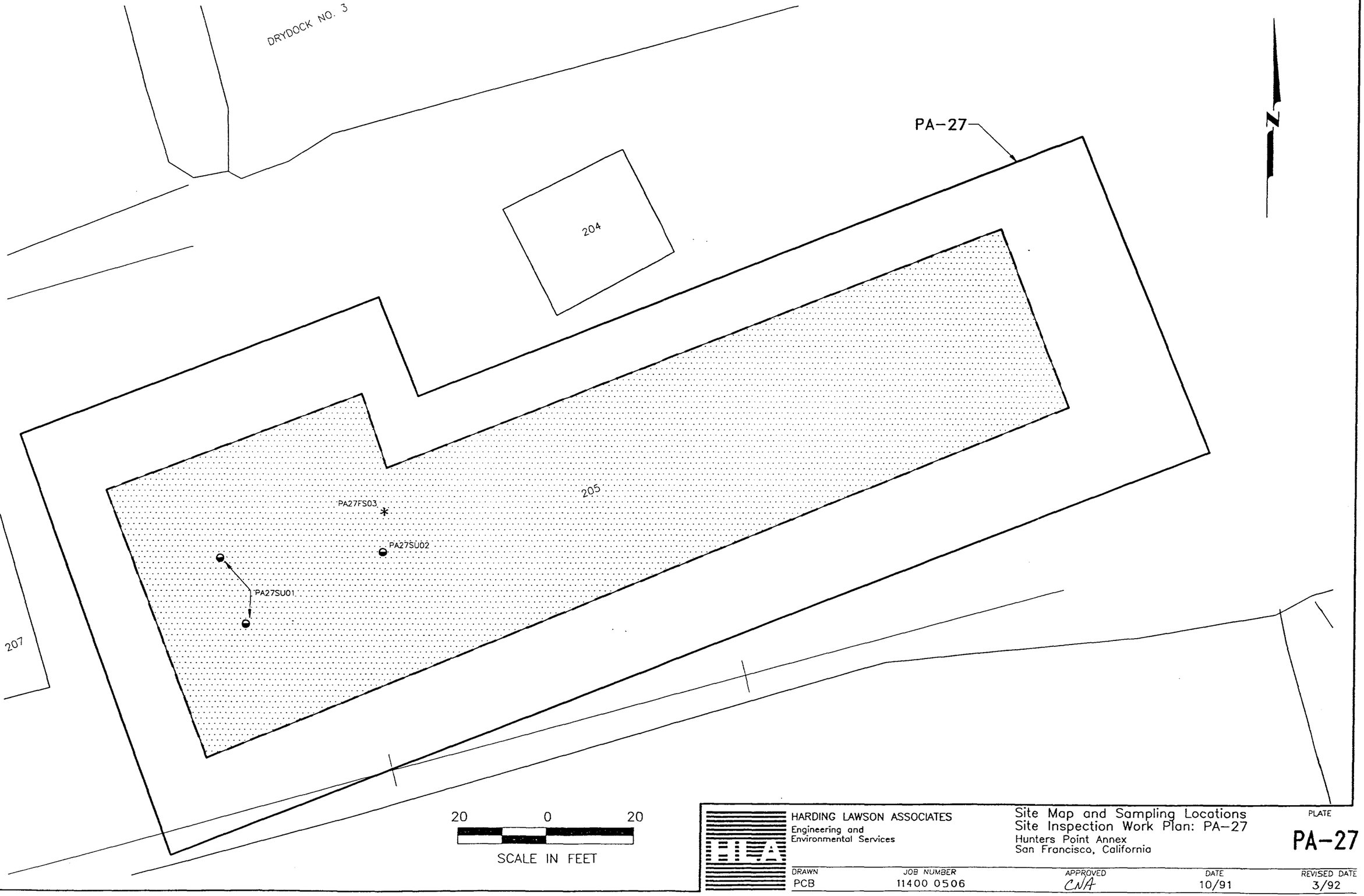
SUMMARY OF OBSERVATIONS:

Evidence of previous asbestos remediation activities is present. Disturbed materials including asbestos dust remain on the floor and in other areas. A pile of scrap switches is on the floor in a puddle of oil. Gear oil remains in lubricating pans beneath large pulley gear motors. A deep subsurface pump room flooded with what appears to be Bay water may contain petrochemicals. Soil sampling recommended in Table 4 of Appendix A does not appear appropriate at the present time because the area around the building is paved and no significant staining was observed. Paint was severely chipped and flaking and may contain lead.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Composite of oil in lubricating pans under pulley gears	PA27SU01	1	1	1	1	1	1	
Water in pump chamber	PA27SU02	1	1	1	1	1	1	
Oil around switching mechanisms	PA27FS03	1	1	1	1	1	1	
TOTAL ANALYSES		3	3	3	3	3	3	



HPAH0204 20.0
19920316.1358

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-27
Hunters Point Annex
San Francisco, California

PLATE
PA-27

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

EXHIBIT 28

PA: 28

BUILDING/AREAS: 211/253

BUILDING/AREA NAME: Electronics, Optical and Ordnance Shops

HISTORICAL USE: Machining, welding, assembly, painting

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Possible UST, painting and process residues, sumps

SUMMARY OF OBSERVATIONS:

Buildings 211 and 253 are interconnected. Building 253 has six main production floors and a tower. Repair, testing, and fabrication of a variety of electronic-, optical-, and ordnance-related equipment occurred. The two buildings share a common main production floor, 1 large and 2 small paint booths, 2 large dip tanks, 1 large vapor degreaser, resin impregnation tanks, and a parts washer. There are several other process tanks on the third, fourth, and fifth floors of Building 253. The buildings share a common drain system that runs to a large sump on the west end of 253. Sumps on the first floor in Building 253 and in the associated bomb shelter, Building 224, appeared to be collection points for a variety of process waste streams. Fluid was observed leaking from a transformer and an electrical insulator south of Building 211; PCB labels were not present. A UST location is suspected on the basis of an observed fuel dispenser pump in the paint room. A sump built into a curing or drying oven is present in the north-central portion of 211.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows (see Plate PA-28a):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Stormwater drain	PA28SW01	1	1	1	1	1	1	
Resin impregnation sump contents (1st floor)	PA28SU02	1	1	1	1	1	1	
Sump in bomb shelter (Building 224)	PA28SU03	1	1	1	1	1	1	
Composite of residue on surfaces of 3 paint booths	PA28FS04	1	1	1	1	1	1	
Floor stain under transformer	PA28FS05	1	1	1	1	1	1	
Sump in southwest corner	PA28SU06	1	1	1	1	1	1	
Sump in oven	PA28SU07	1	1	1	1	1	1	
Residue in paint booth on third floor	PA28FS08	1	1	1	1	1	1	
Composite of solids in 3 parts washers (3rd floor)	PA28TK09	1	1	1	1	1	1	
Composite of residue from 2 dip tanks (4th floor)	PA28TK10	1	1	1	1	1	1	

EXHIBIT 28
(Continued)

BUILDING/AREAS: 211/253 (continued)

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Composite of residue in molten salt tanks (5th floor)	PA28TK11						1	Cl, SO_4, NO_3
Drain trap sump near sink (5th floor)	PA28SU12	1	1	1	1	1	1	
Dip tank residue (5th floor)	PA28TK13	1	1	1	1	1	1	
TOTAL ANALYSES		12	12	12	12	12	13	

PA: 28

BUILDING/AREA: 219

BUILDING/AREA NAME: Substation E, S-03

HISTORICAL USE: Electrical Substation

CURRENT USE: Electrical Substation

AREA/TYPE OF CONCERN: PCB Transformers

SUMMARY OF OBSERVATIONS:

This building is secured and keys were unavailable. ERM West (*1988*) reported three PCB-containing transformers, a sump, and three 55-gallon drums of PCB-containing oil inside. Leaks have occurred on the floor inside, and there are oil stains on the pavement outside.

PROPOSED WORK PLAN:

Task 1. With Navy assistance, gain access and verify presence of PCB-containing transformers and drums. Drums will be properly disposed.

Task 2. Collect and analyze samples as follows (see Plate PA-28b):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath stain on pavement	PA28B14	1	1	1				
Stain on floor	PA28FS15	1	1	1				
Drum #1	PA28DM16	1	1	1				
Drum #2	PA28DM17	1	1	1				
Drum #3	PA28DM18	1	1	1				
Sump contents, if present	PA28SU19	1	1	1				
Soil boring beneath sump	PA28B20	1	1	1				
TOTAL ANALYSES		7	7	7				

PA: 28

BUILDING/AREA: 230

BUILDING/AREA NAME: Shop Service

HISTORICAL USE: Machine shop

CURRENT USE: Plastics, machine shop, automotive paint shop

AREA/TYPE OF CONCERN: Soil stain near storm drain; cracked, stained asphalt.

SUMMARY OF OBSERVATIONS:

A stain extends from the southwest corner of the building (paint shop area) to a storm drain containing oil and foam. There is a stain on cracked asphalt near the southeast corner of the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows (see Plate PA-28c):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath stain on cracked asphalt	PA28B21	3	3	3	3	3	3	
Storm drain	PA28SW22	1	1	1	1	1	1	
TOTAL ANALYSES		4	4	4	4	4	4	

EXHIBIT 28
(Continued)

PA: 28

BUILDING/AREA: 231

BUILDING/AREA NAME: Machine Shop, S-31

HISTORICAL USE: Machining

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Lubricant oils, oil releases, multiple subfloor trenching and piping runs, large exterior sump

SUMMARY OF OBSERVATIONS:

Inside this multi-story, heavy industrial machining building are several air treatment systems, sumps containing lubricant oils under large machinery, a wooden floor soaked with oil, sandblasting rooms, and other sumps and trenches. A large sump at the northeast exterior contains an unknown liquid. Two tanks labeled "phosphate" and "hydrazine" were observed. A red ink-like stain observed on the second floor may be associated with PCBs or metal constituents. A pile of partially combusted orange/pink tailings or shavings was observed behind a large machine at which the presence of organic compounds other than SOCs is not suspected.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation on first floor and within 40-foot radius of the building to locate subsurface piping and covered trenches.

Task 2. Drill and sample eight soil borings, and complete four borings as monitoring wells.

Task 3. Sample collection and analysis as follows (see Plate PA-28b):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil boring adjacent to northeast exterior sump	PA28B23	3	3	3	3	3	3	
Northeast exterior sump liquid	PA28SU24	1	1	1	1	1	1	
Trench under overhead door	PA28TA25	1	1	1	1	1	1	
Trench under railroad door	PA28TA26	1	1	1	1	1	1	
Trench under railroad door	PA28TA27	1	1	1	1	1	1	
Baghouse solids	PA28SB28					1	1	CN
Machine lube oil sumps	PA28SU29	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU30	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU31	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU32	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU33	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU34	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU35	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU36	1	1	1	1	1	1	
Machine lube oil sumps	PA28SU37	1	1	1	1	1	1	
Northwest corner sump	PA28SU38	1	1	1	1	1	1	
North central sump with liquid	PA28SU39	1	1	1	1	1	1	

EXHIBIT 28
(Continued)

Harding Lawson Associates

BUILDING/AREA: 231

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Northeast sump with liquid	PA28SU40	1	1	1	1	1	1	
Composite sand/oil mounds	PA28BK41	1	1	1	1	1	1	
Orange/pink solid residue	PA28BK42					1	1	
Composite of storage tanks	PA28TK43	1	1	1	1	1	1	
Soil beneath stains on north side	PA28B44	3	3	3	3	3	3	
Soil beneath stains on south side	PA28B45	3	3	3	3	3	3	
Salt residue	PA28FS46							PO_4 Hydrazine
Soil adjacent to oil sump	PA28B47	3	3	3	3	3	3	
Soil adjacent to oil stained floor	PA28B48	3	3	3	3	3	3	
Soil adjacent to sump	PA28B49	3	3	3	3	3	3	
Southeast corner adjacent to sump	PA28MW50*	5	5	5	5	5	5	
Southwest corner between sumps	PA28MW51*	5	5	5	5	5	5	
Northwest corner adjacent to sump	PA28MW52*	5	5	5	5	5	5	
Northeast corner adjacent to storage tanks	PA28MW53*	5	5	5	5	5	5	
Composite of machine drip pans (sumps) on second floor	PA28SU54	1	1	1	1	1	1	
Red stain on floor, second floor "General Foreman's office"	PA28FS55			1			1	
TOTAL ANALYSES		57	57	58	57	59	60	

* 5 samples include: 3 soil samples above the water table, 1 soil sample beneath the water table, and 1 groundwater sample

PA: 28

BUILDING/AREA: 258

BUILDING/AREA NAME: Pipe Fitters Shop

HISTORICAL USE: Pipe manufacturing

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Dip tank operation, oil stains on northern exterior

SUMMARY OF OBSERVATIONS:

At the east end of the building is a large degreasing and pickling operation with large dip tanks and drainage sumps. Discoloration and evidence of historical spilling exists. Oil stains from parts dumping are present on surrounding concrete and asphalt on the north exterior. Heavy oil stains exist on the first floor near previous machine indentations. An asbestos fabrication area on the third floor should be surveyed. An electric elevator winch in the tower has a lube oil drip pan containing oil. Floor plates were observed but could not be lifted.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation over the floor to locate piping and trenches.

Task 2. Collect and analyze samples as follows (see Plate PA-28c):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Elevator drip pan (3rd floor)	PA28SU56	1	1	1	1	1	1	
Oil on 1st floor	PA28FS57	1	1	1	1	1	1	
Oil on 1st floor	PA28FS58	1	1	1	1	1	1	
Oil on pavement	PA28FS59	1	1	1	1	1	1	
Soil under exterior oil spills	PA28B60	2	2	2	2	2	2	
Soil under dip tanks	PA28B61	3	3	3	3	3	3	
Soil under dip tanks	PA28B62	3	3	3	3	3	3	
Soil under leaking electric pump	PA28B63	3	3	3	3	3	3	
TOTAL ANALYSES		15	15	15	15	15	15	

PA: 28

BUILDING/AREA: 270

BUILDING/AREA NAME: Paint Shop, S-71

HISTORICAL USE: Paint shop

CURRENT USE: Furniture and refrigerator storage

AREA/TYPE OF CONCERN: Oil stains on asphalt near storm drains; sandblast material; oil and solvent storage

SUMMARY OF OBSERVATIONS:

Suspected solvent and oil storage in 5- and 55-gallon drums, a sandblast booth and baghouse, and two storm drains were observed at the east exterior of the building. There was evidence that oil- and sandblast-containing runoff enters the storm drains.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows (see Plate PA-28c):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath oil stained asphalt	PA28B64	3	3	3	3	3	3	
Northeast exterior	PA28SW65	1	1	1	1	1	1	CN
Southeast exterior	PA28SW66	1	1	1	1	1	1	
Sandblast material near baghouse	PA28SB67					1	1	CN
TOTAL ANALYSES		5	5	5	5	6	6	

PA: 28

BUILDING/AREA: 271

BUILDING/AREA NAME: Paint Shop Annex

HISTORICAL USE: Painting, sandblasting, curing

CURRENT USE: Storage and office space

AREA/TYPE OF CONCERN: Possible radioactive materials, transformers, sandblast materials, and potentially impacted storm drain

SUMMARY OF OBSERVATIONS:

There is a "Danger-Radioactive Material" sign at the north end of the building although no evidence, e.g., labelled containers, of radioactive materials was observed (see Section 2.3.5). On the southwest side of the building, a sandblast booth storm drain is present about 40 feet laterally downslope of the building. There is a large stain on the asphalt pavement at the exterior of the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows (see Plate PA-28c):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Storm drain at southwest exterior	PA28SW68	1	1	1	1	1	1	CN
Soil under asphalt stain	PA28SS69	1	1	1	1	1	1	
TOTAL ANALYSES		2	2	2	2	2	2	

PA: 28

BUILDING/AREA: 281

BUILDING/AREA NAME: Electronics - Weapons Precision Facility/Machine Shop

HISTORICAL USE: Unknown

CURRENT USE: Storage

AREA/TYPE OF CONCERN: Exterior sump, soil

SUMMARY OF OBSERVATIONS:

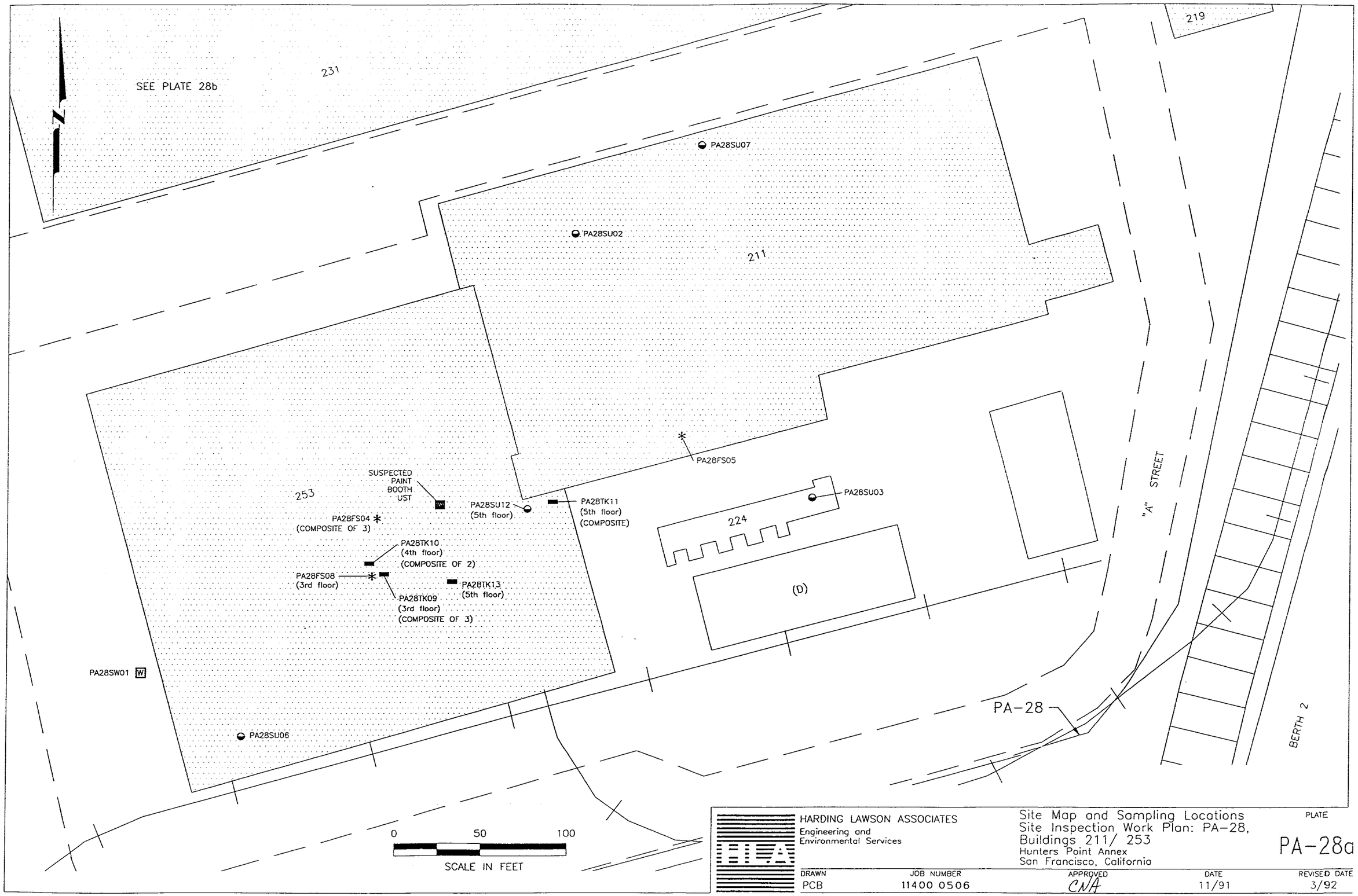
HLA field inspectors were informed this building was off limits. No ongoing processes were observed in the building; however, remnants of a large air vacuum system exist. The vacuum system may have carried metal or plastic particles that spilled onto the soil. Wooden crates, likely containing weapons parts, were stored on the floor. There is an elevator at the northeast exterior corner. A large vault/sump under the elevator contains liquid.

PROPOSED WORK PLAN:

Task 1. Gain access with assistance of the Navy to building to further assess.

Task 2. Collect and analyze samples as follows (see Plate PA-28c):

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Liquid in elevator sump	PA28SU70	1	1	1	1	1	1	
Soil beneath air vacuum system	PA28B71					1	1	
Soil beneath elevator sump	PA28B72	2	2	2	2	2	2	
Soil beneath buckled flooring	PA28B73	1	1	1	1	1	1	
TOTAL ANALYSES		4	4	4	4	5	5	



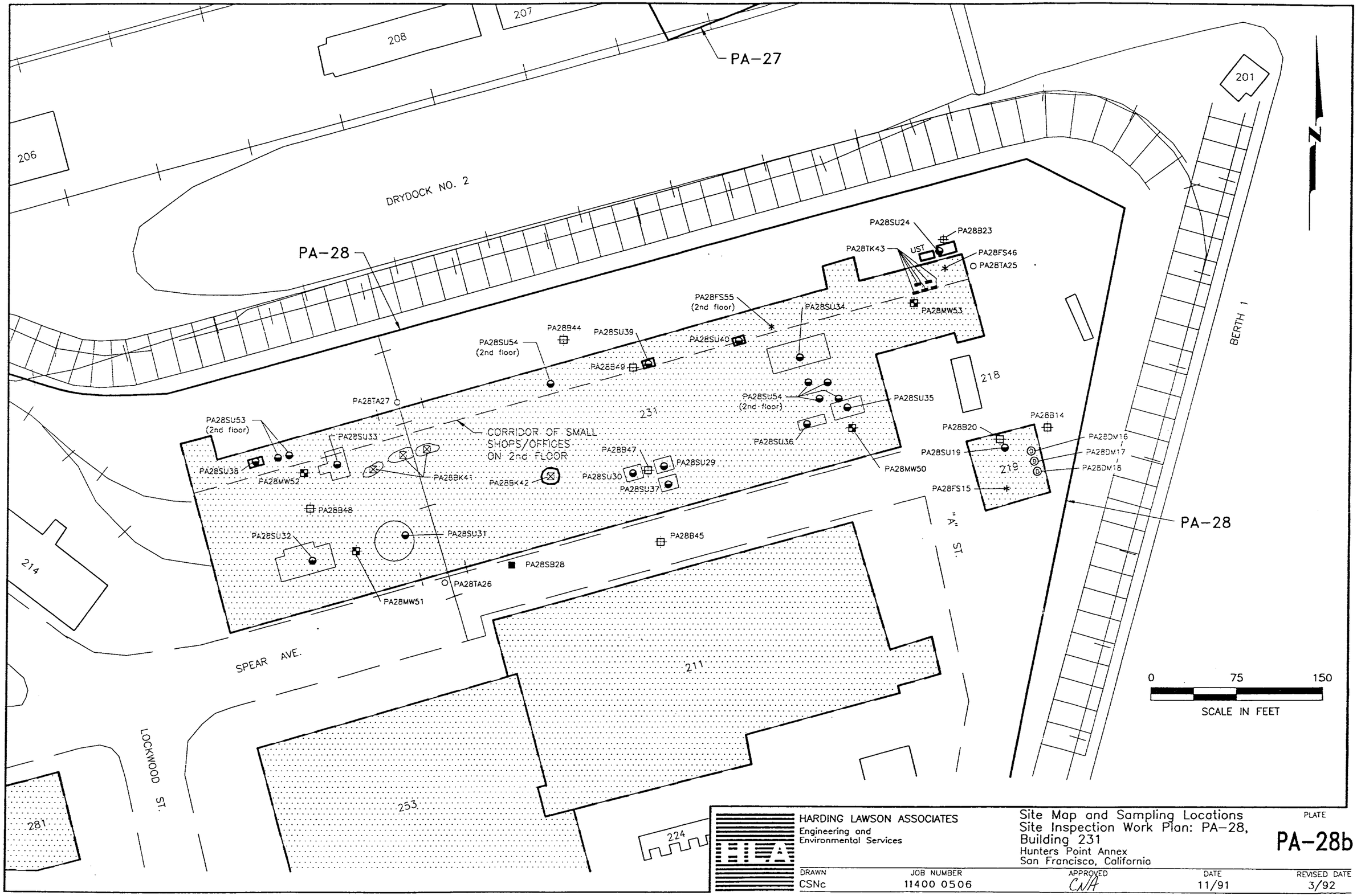
HPAH0205 50.0
19920701.1709

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-28,
Buildings 211/ 253
Hunters Point Annex
San Francisco, California

PLATE
PA-28a

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92



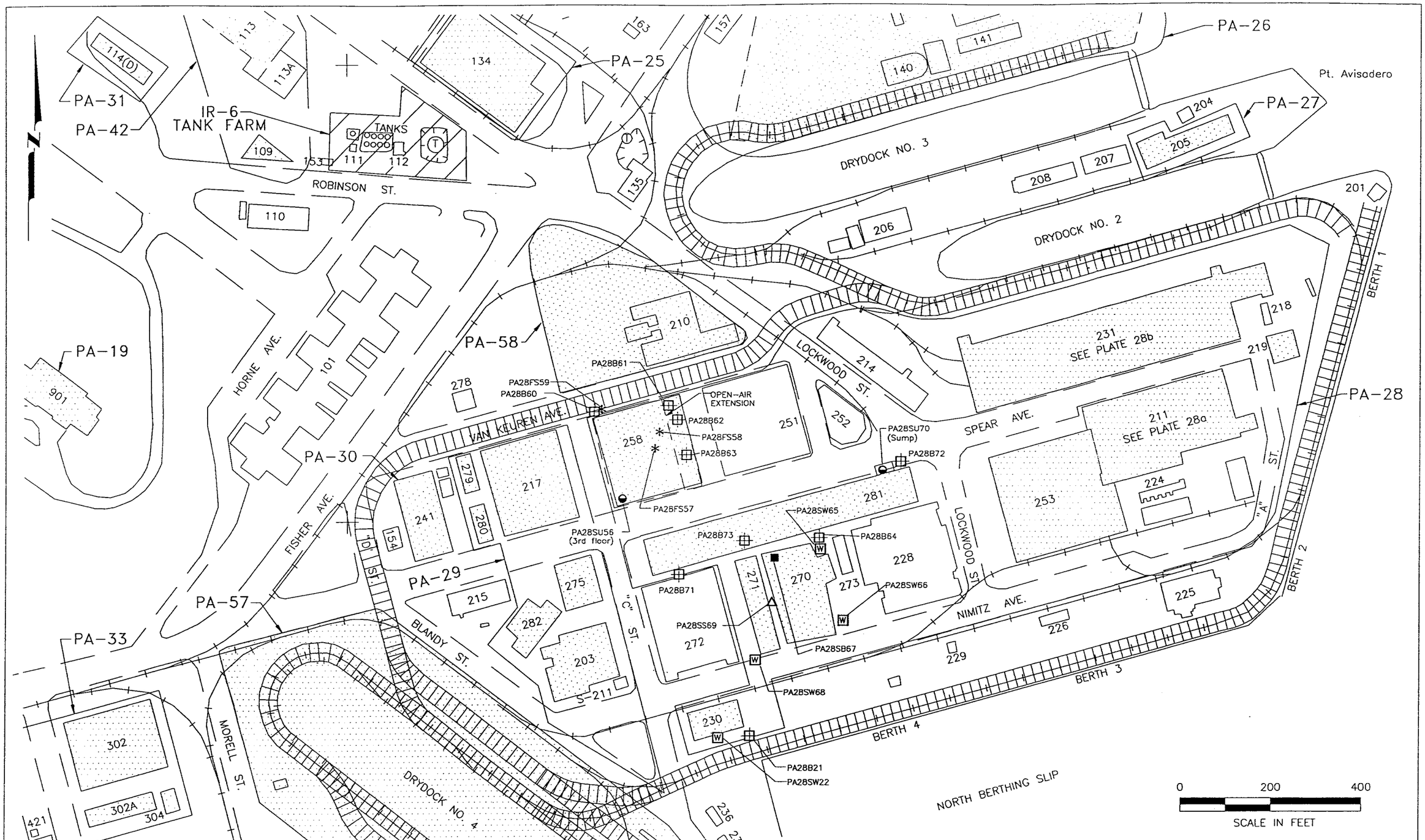
HPAH0206 75.0
19920319.1626

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-28,
Building 231
Hunters Point Annex
San Francisco, California

PLATE
PA-28b

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
CSNc	11400 0506	CWA	11/91	3/92



HPAH0207 200.0
19920702.0851

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-28
Hunters Point Annex
San Francisco, California

PLATE
PA-28c

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

EXHIBIT 29

Harding Lawson Associates

PA: 29

BUILDING/AREA: 203

BUILDING/AREA NAME: Power Plant Substation "H" S03

HISTORICAL USE: Boiler Room

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Tank contents

SUMMARY OF OBSERVATIONS:

There are three aboveground storage tanks on the east side of the building; one tank contains diesel fuel; one tank is marked ORM-E; and the third is a stainless steel acid tank not suspected of containing organic compounds.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Storage tank contents	PA29TK01	1	1	1	1	1	1	
Storage tank contents	PA29TK02	1	1	1	1	1	1	
Soil beneath tanks	PA29B03	2	2	2	2	2	2	
Stainless steel storage tank contents	PA29TK04						1	PO_4 SO_4 Cl NO_3
TOTAL ANALYSES		4	4	4	4	4	5	

PA: 29

BUILDING/AREA: 217

BUILDING/AREA NAME: Sheet Metal Shop

HISTORICAL USE: Sheet metal shop, photoengraving, welding, and painting

CURRENT USE: Warehouse/storage of furniture and other materials

AREA/TYPE OF CONCERN: Photoengraving dip tank residue, soil discoloration, paint residue, particulates

SUMMARY OF OBSERVATIONS:

Dipping tanks used for photoengraving may contain metal residues. Soil was observed in the utility floor trench on the west side of the building. A waterfall-type paint booth in the south end of the building may contain paint residue. Floor staining was observed in the welding room. Particulates were present in a baghouse on the east exterior side of the building. A storm drain beneath the exterior stairway on the east side of the building may have received particulates and process runoff. There is a floor sump near the center of the building; its contents are unknown.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Discolored soil on floor of floor trench	PA29TA05	1	1	1	1	1	1	
Residue in bottom of photoengraving dip tank (2nd floor)	PA29TK06	1	1	1	1	1	1	
Paint residue on paint booth	PA29FS07	1	1	1	1	1	1	
Floor of welding room	PA29FS08	1	1	1	1	1	1	
Storm drain under stairway	PA29SW09	1	1	1	1	1	1	
Particulate sediment in baghouse	PA29SB10					1	1	CN
Adjacent to center sump	PA29SB11	3	3	3	3	3	3	
TOTAL ANALYSES		8	8	8	8	9	9	

PA: 29

BUILDING/AREA: 275

BUILDING/AREA NAME: Sheet Metal Annex, S-17; E.E.I. Casting

HISTORICAL USE: Sheet metal fabrication

CURRENT USE: Aluminum casting in sand molds

AREA/TYPE OF CONCERN: Suspected aluminum oxide alloy powder on floor, drum storage at exterior

SUMMARY OF OBSERVATIONS:

Aluminum oxide alloy fines are dispersed on the floor and other horizontal surfaces throughout the building and are dropping onto the exterior pavement through seams in the walls; although only aluminum is suspected, additional metals may be present as well as casting sand containing CN. Apparently empty drums and equipment are stored on the pavement in the southwest corner over a storm drain. Leakage to the storm drain was observed. Various spills were observed on the surrounding pavement. A tank pad at the northeast corner and a leaking air compressor on the south side in an open storage shed were observed.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation near and around the tank pad for possible subsurface product pipelines.

Task 2. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Contents in sump	PA29SU12	1	1	1	1	1	1	CN
Sand mold	PA29BK13						1	CN
Composite of fines	PA29FS14						1	CN
Composite of fines	PA29FS15						1	CN
Boring near tank pad	PA29B16	3	3	3	3	3	3	
Boring near storm drain	PA29B17	3	3	3	3	3	3	
Storm drain	PA29SW18	1	1	1	1	1	1	CN
Oil leak beneath compressor	PA29FS19	1	1	1	1	1	1	
TOTAL ANALYSES		9	9	9	9	9	12	

PA: 29

BUILDING/AREA: 279

BUILDING/AREA NAME: Materials storage racks

HISTORICAL USE: Equipment or product storage, product(s) unknown

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Soil discoloration west of building; floor and storm drains

SUMMARY OF OBSERVATIONS:

The concrete floor has indentations where machinery existed. A trench and floor drain in the center of the building likely connects to a storm drain west of the building. Parts, dip-cleaning baskets, dip tanks, and garbage pails containing oil are stored west of the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Residue in trench	PA29TA20	1	1	1	1	1	1	
Storm drain	PA29SW21	1	1	1	1	1	1	
Soil near storm drain	PA29B22	3	3	3	3	3	3	
Contents of containers (composite)	PA29DM23	1	1	1	1	1	1	
Soil under oil containers	PA29B24	1	1	1	1	1	1	
TOTAL ANALYSES		7	7	7	7	7	7	

EXHIBIT 29
(Continued)

PA: 29

BUILDING/AREA: 280

BUILDING/AREA NAME: Covered Work Area S-17

HISTORICAL USE: Aluminum cleaning, oil recycling

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Floor and pavement stains; collection trench through center of building; drums on north side

SUMMARY OF OBSERVATIONS:

Signs on the wall indicate that a series of dip/cleaning tanks once existed here. Additional observations include a salt residue buildup in the northwest corner, a dark oily stain along the west wall, which suggests leakage out of the building onto the pavement and into a storm drain west of the building, a trench traversing the center of the building (east-west), a reddish brown stain on the pavement east of the building, drums with oil and metal shavings north of the building, and an oily tar-like buildup along the north exterior edge of the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Residual salts on floor	PA29FS25						1	Na
Oily residue on floor	PA29FS26	1	1	1	1	1	1	
Oil stain west of building	PA29SS27	1	1	1	1	1	1	
Residue in trench	PA29TA28	1	1	1	1	1	1	
Red-brown stain	PA29SS29	1	1	1	1	1	1	
Beneath stained soil	PA29B30	3	3	3	3	3	3	
Beneath stained soil	PA29B31	3	3	3	3	3	3	
Drum contents composite	PA29DM32	1	1	1	1	1	1	
TOTAL ANALYSES		11	11	11	11	11	12	

PA: 29

BUILDING/AREA: 282

BUILDING/AREA NAME: Abrasive Blast Facility

HISTORICAL USE: Sandblasting

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Sandblast material

SUMMARY OF OBSERVATIONS:

A sealed chamber in the building serves as a blasting room. Air in the chamber is evacuated through a raised waffled floor to a large baghouse filtration system adjacent to the chamber. Piles of blasting debris were observed in the building both inside and outside of the chamber. Paint stains are present on the surrounding pavement.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Composite of sandblast materials	PA29SB33					1	1	CN
Soil beneath paint stains	PA29SS34	1	1	1	1	1	1	
Soil beneath paint stains	PA29SS35	1	1	1	1	1	1	
TOTAL ANALYSES		2	2	2	2	3	3	

PA: 29

BUILDING/AREA: Area bounded by Nimitz, Blandy, and C Streets

BUILDING/AREA NAME: Not applicable

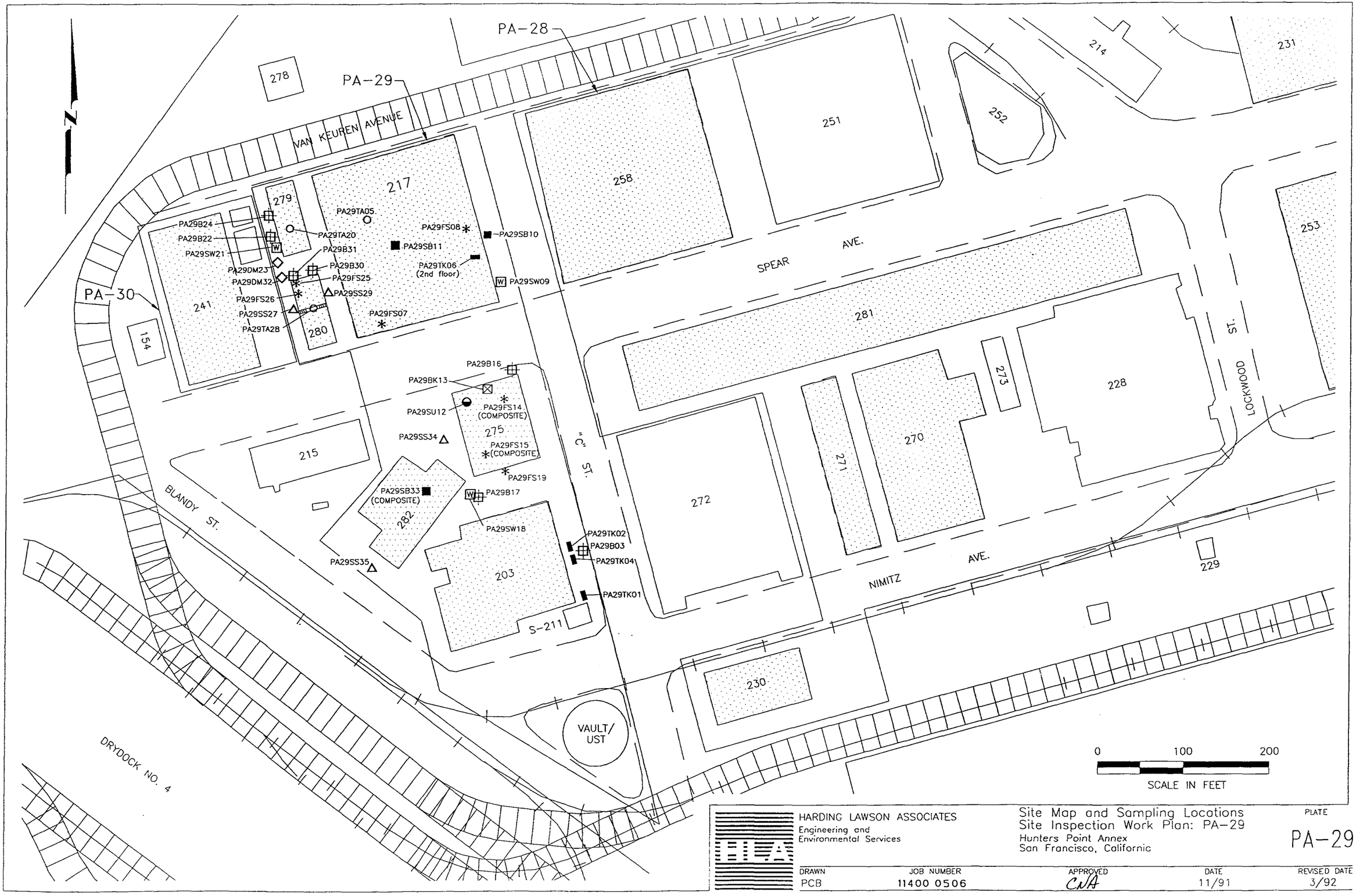
HISTORICAL USE: Fuel oil storage vault

CURRENT USE: Vault closed in-place and paved

AREA/TYPE OF CONCERN: Fuel storage

SUMMARY OF OBSERVATIONS:

A 210,000-gallon fuel oil storage vault/UST was being closed in place during the site inspection. The interior of the vault was observed being steam cleaned, the liquid was being pumped out, and a soil sampling program was being implemented. At the time of this work plan preparation, the site was paved. Results of soil sample analysis indicated that low levels of TPH, SOCs, PCBs, and lead were present in four of seven soil samples collected around the perimeter of the vault. Results of the investigation performed near the vault are under review (*PRC, 1992*). These results will be assessed in conjunction with other sample data collected at PA-29. No sampling is recommended at this time.



HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-29
Hunters Point Annex
San Francisco, Californic

PLATE
PA-29

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

HPAH0208 100.0
19920316.1146

EXHIBIT 30

PA: 30

BUILDING/AREA: 241

BUILDING/AREA NAME: Forge Shop S-23, Golden Gate Heat Treating

HISTORICAL USE: Foundry

CURRENT USE: Metal heat treating

AREA/TYPE OF CONCERN: Asbestos firebrick in foundry area, soil staining, utility trench

SUMMARY OF OBSERVATIONS:

Approximately one-third of the building is currently occupied by Golden Gate Heat Treating (GGHT), which uses various chemicals that are stored in a metal "flammable cabinet." A quench tank used by GGHT drains into an unlined utility trench system in the floor. The remainder of the building is unoccupied and was a dirt-floored foundry. Stains and discolored soil are present throughout the building interior. On the building's exterior southeast corner, oil was observed oozing from under the walls. Several furnaces inside the building contain asbestos fire brick. A metal-framed structure on the east exterior side of the building appears to have been used as a covered storage area. Metal in this structure appears corroded, and wood flooring appears damaged by chemicals.

PROPOSED WORK PLAN:

Task 1. Install five monitoring wells in areas beneath heavy oil staining and around building to assess potential migration of oil in soil.

Task 2. Collect and analyze samples as follows:

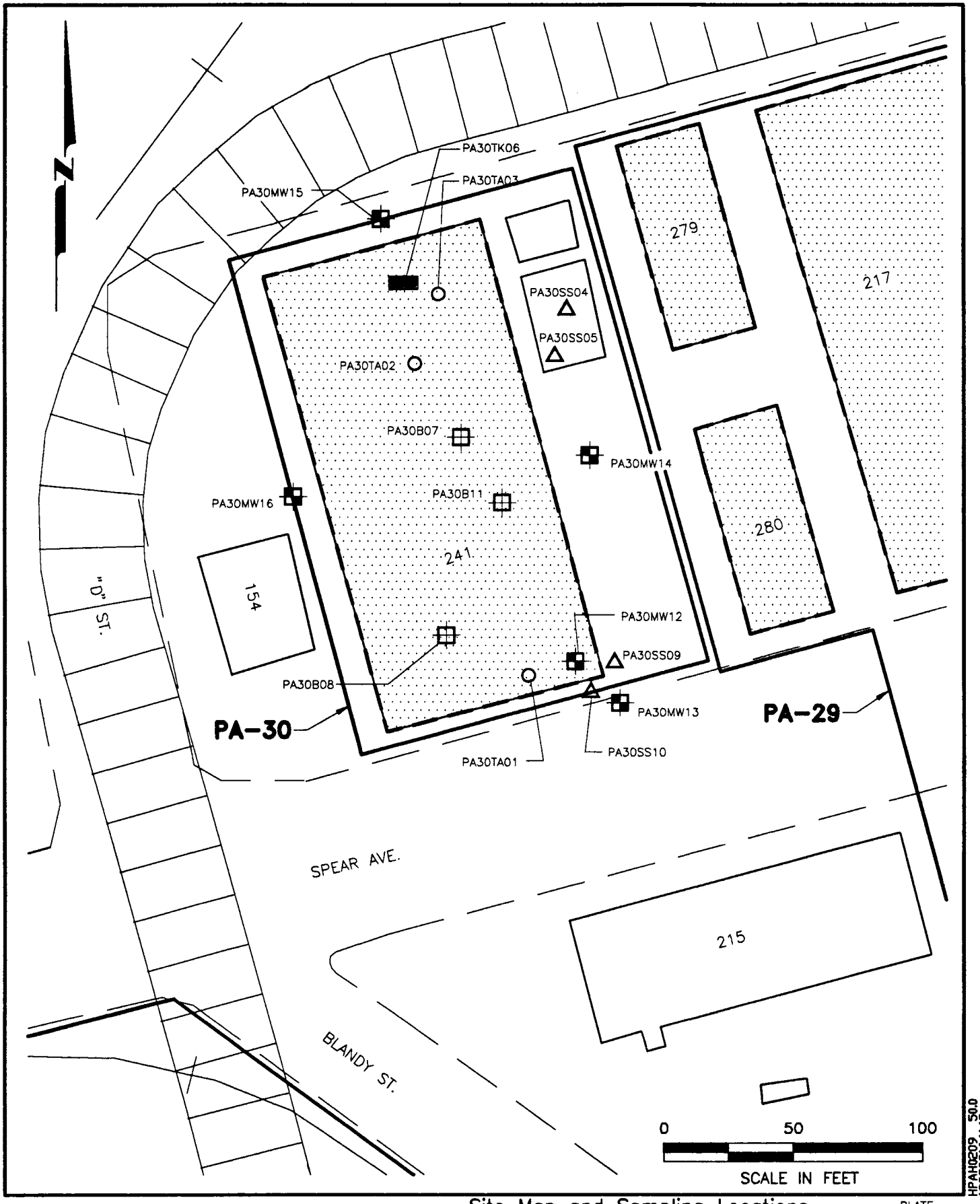
Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Floor of pipe vault	PA30TA01	1	1	1	1	1	1	CN
Floor of pipe trench	PA30TA02	1	1	1	1	1	1	CN
Floor of pipe trench	PA30TA03	1	1	1	1	1	1	CN
Floor of storage area	PA30SS04	1	1	1	1	1	1	CN
Floor of storage area	PA30SS05	1	1	1	1	1	1	CN
Contents of quench tank	PA30TK06	1	1	1	1	1	1	CN
Soil beneath floor of foundry	PA30B07	3	3	3	3	3	3	
Soil beneath floor in stain area	PA30B08	3	3	3	3	3	3	
Soil in area of stain coming from bldg.	PA30SS09	1	1	1	1	1	1	

EXHIBIT 30
(Continued)

BUILDING/AREA: 241

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil in area of stain coming from bldg.	PA30SS10	1	1	1	1	1	1	
Soil beneath stain area	PA30B11	3	3	3	3	3	3	
Soil and groundwater beneath stain area	PA30MW12*	5	5	5	5	5	5	
Vicinity of stains, southeast corner of building (exterior)	PA30MW13*	5	5	5	5	5	5	
Center of east side (exterior)	PA30MW14*	5	5	5	5	5	5	
North side (exterior)	PA30MW15*	5	5	5	5	5	5	
West side (exterior)	PA30MW16*	5	5	5	5	5	5	
TOTAL ANALYSES		42	42	42	42	42	42	

* 5 samples include: 3 soil samples above the water table, 1 soil sample beneath the water table, and 1 groundwater sample



HPAH0209 50.0
19920316.1148

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-30
Hunters Point Annex
San Francisco, California

PLATE
PA-30

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA		3/92

EXHIBIT 31

PA: 31

BUILDING/AREA: 114

BUILDING/AREA NAME: Office Building

HISTORICAL USE: Unknown

CURRENT USE: Building removed, recreation area with archery, horseshoes, etc.

AREA/TYPE OF CONCERN: Possible sandblast material

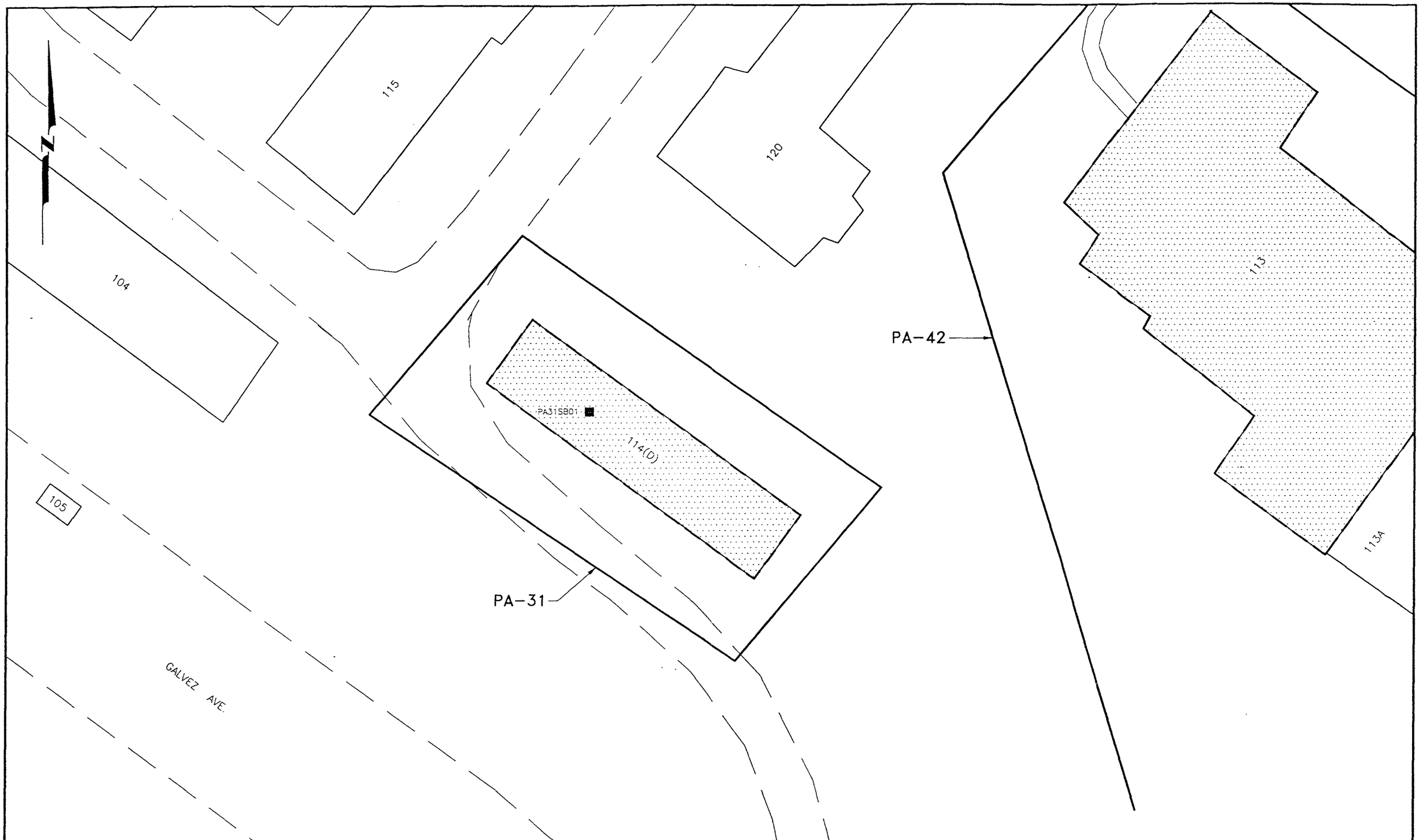
SUMMARY OF OBSERVATIONS:

Building has been removed. Some evidence of building footings remains. Area has been covered by sand that appears to be sandblasting residue. Nearby Building 113A, according to Plate 2, is mislabelled as 114 and is occupied by Smith-Emery Test Facility.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Sandblast material composite	PA31SB01					1	1	CN
TOTAL ANALYSES						1	1	



HPAH0210 40.0
19920316.1149

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-31
Hunters Point Annex
San Francisco, California

PLATE
PA-31

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

EXHIBIT 33

PA: 33

BUILDING/AREA: 302

BUILDING/AREA NAME: Transportation Shop, S-02

HISTORICAL USE: Repairing automotive equipment

CURRENT USE: Repairing automotive equipment and contractor office space

AREA/TYPE OF CONCERN: Waste oil, sump contents, and drummed material

SUMMARY OF OBSERVATIONS:

Suspected hazardous material or waste areas include sumps, a locomotive repair pit containing black sludge, a baghouse in a welding area, lubrication hoses, tanks in sumps below floor level, a battery maintenance room with residual acid salts and possibly metals (especially lead), hydraulic lifts, containers of lube oils and fuel, storage containers for waste oil and solvents (solvent-like odor) outside the building, potential underground storage tanks, and stains on the pavement leading to storm drains. Several pipelines go beneath the concrete floor and are not visually traceable. Particulate matter suspected to contain metals was piled beneath a welding operation baghouse.

PROPOSED WORK PLAN:

Task 1. Perform geophysical survey inside and within a 20-foot radius of the building to locate pipelines and trenches beneath the building and the adjacent exterior pavement.

Task 2. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Locomotive repair pit	PA33TA01	1	1	1	1	1	1	
Soil beneath air compressor leak	PA33SS02	1	1	1	1	1	1	
Sump (center of bldg.)	PA33SU03	1	1	1	1	1	1	Glycols
Welding baghouse filtrate	PA33BK04						1	
Liquid in tank sump	PA33SU05	1	1	1	1	1	1	Glycols
Battery room salts	PA33FS06						1	SO_4, Cl, NO_3, PO_4
Waste oil/liquid tank	PA33TK07	1	1	1	1	1	1	Glycols
Waste oil/liquid tank	PA33TK08	1	1	1	1	1	1	Glycols
Waste oil/liquid tank	PA33TK09	1	1	1	1	1	1	Glycols
Waste oil/liquid tank	PA33TK10	1	1	1	1	1	1	Glycols
Soil beneath tanks	PA33B11	1	1	1	1	1	1	Glycols
Storm drain, north side	PA33SW12	1	1	1	1	1	1	Glycols
TOTAL ANALYSES		10	10	10	10	10	12	

PA: 33

BUILDING/AREA: 302A

BUILDING/AREA NAME: Transportation Shop Annex, S-02

HISTORICAL USE: Vehicle repair, painting, and sandblasting, *Universal Painting and Sandblasting* (past tenant)

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Potential petroleum product lines or USTs beneath foundation and runoff into storm drains

SUMMARY OF OBSERVATIONS:

Storm drains on north and south sides of building likely contain waste petrochemicals and paint. Integrity of hydraulic lifts inside building is unknown. Wall-mounted hydraulic lines and gear oil delivery lines may still contain product. Unidentified USTs may be present. Floor stains were present in the welding room.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil between hydraulic lifts inside building	PA33B13	3	3	3	3	3	3	
Storm drain north of building	PA33SW14	1	1	1	1	1	1	
Storm drain	PA33SW15	1	1	1	1	1	1	
Stain in welding room	PA33FS16	1	1	1	1	1	1	
Floor drain in building	PA33FD17	1	1	1	1	1	1	
TOTAL ANALYSES		7	7	7	7	7	7	

PA: 33

BUILDING/AREA: 304

BUILDING/AREA NAME: Service Station, S-02

HISTORICAL USE: Vehicle service station

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Wall mounted pipelines, soil beneath hydraulic lifts

SUMMARY OF OBSERVATIONS:

A UST removal was underway. Source control or soil samples have not yet been collected. The UST removal procedures are under review (*PRC, 1992*). Product lines from the dispenser island do not appear to have been removed. The condition of hydraulic lifts on the west side of the building exterior is unknown. Numerous wall-mounted pipelines in the building may contain petrochemicals. Paint is severely chipped and flaking and may contain lead or other heavy metals.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation to locate subsurface product lines in the building and within 20-foot radius of building.

Task 2. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil between hydraulic lifts	PA33B18	3	3	3	3	3	3	
South exterior drain sump	PA33SW19	1	1	1	1	1	1	CN
Composite of soil containing paint chips	PA33SS20						1	
TOTAL ANALYSES		4	4	4	4	4	5	

EXHIBIT 33
(Continued)

PA: 33

BUILDING/AREA: 364

BUILDING/AREA NAME: Radiological Research

HISTORICAL USE: Radiation lab, metallurgy shop

CURRENT USE: Metallurgy shop

AREA/TYPE OF CONCERN: Liquid contents in sump

SUMMARY OF OBSERVATIONS:

A large sump on the east side of the building contains water of unknown origin. No odors or oily sheens were observed. Pipes emanating from the building enter trenches that lead to the sump. Interior and exterior of building and sump contents may contain residual radioactivity from previous laboratory activities.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Contents of sump	PA33SU21					1	1	
Soil under pipeline trench	PA33TA22	1	1	1	1	1	1	
TOTAL ANALYSES		1	1	1	1	2	2	

PA: 33

BUILDING/AREA: 411

BUILDING/AREA NAME: Steel Shop; Ship Fitters Shop 11; Boilermakers Shop 41; Welders and Burners Shop 26

HISTORICAL USE: Large machining operations

CURRENT USE: None in the machine area; however, several tenants occupy a corridor of offices along the northeast side of the building.

AREA/TYPE OF CONCERN: Large sumps, subsurface contamination

SUMMARY OF OBSERVATIONS:

Large vaults and sumps are present beneath large hydraulically operated machines and footprints of removed machines. Hydraulic fluid lines and filters extend out of the concrete floor, but their origin and associated storage area were not observed. Tenant operations did not indicate potential environmental problems. At the east exterior wall, an unidentified pipe that extends out of the ground has an attached cylinder and a relief valve; a 55-gallon drum present to contain overflow from the pipe has overflowed onto the soil below. The material is oily; its origin is unknown. Groundwater samples collected from three piezometers in the northern portion of the building did not indicate contamination. Along the south side of the building are several manholes accessing a subsurface trench that contains standing liquid.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Oily liquid in sump	PA33SU23	1	1	1	1	1	1	
Oily liquid in sump	PA33SU24	1	1	1	1	1	1	
Liquid in sump below press	PA33SU25	1	1	1	1	1	1	
Solids in trenches; composite	PA33TA26	1	1	1	1	1	1	CN
Liquid composite in manholes	PA33SU27	1	1	1	1	1	1	
Liquid in sump below press	PA33SU28	1	1	1	1	1	1	
Liquid in sump below press	PA33SU29	1	1	1	1	1	1	
Liquid in open floor sump	PA33SU30	1	1	1	1	1	1	
Liquid in floor sump	PA33SU31	1	1	1	1	1	1	
Liquid in sump below roller	PA33SU32	1	1	1	1	1	1	

EXHIBIT 33
(Continued)

BUILDING/AREA: 411 (continued)

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Liquid in sump below roller	PA33SU33	1	1	1	1	1	1	
Liquid in sump below press	PA33SU34	1	1	1	1	1	1	
Soil beneath leaking drum	PA33B35	2	2	2	2	2	2	
Soil and groundwater adjacent to vault	PA33MW36*	5	5	5	5	5	5	
Soil and groundwater adjacent to trenches, manholes	PA33MW37*	5	5	5	5	5	5	
TOTAL ANALYSES		24	24	24	24	24	24	

* 5 samples include: 3 soil samples above the water table, 1 soil sample beneath the water table, and 1 groundwater sample

EXHIBIT 33
(Continued)

PA: 33

BUILDING/AREA: 418

BUILDING/AREA NAME: Q & RA Welding Engineering Facility

HISTORICAL USE: Welding supply storage

CURRENT USE: Administrative office, vehicle maintenance, and vehicle/tank storage for Hydro-Chem Services, Inc. (Tenant)

AREA/TYPE OF CONCERN: Stained pavement and soil

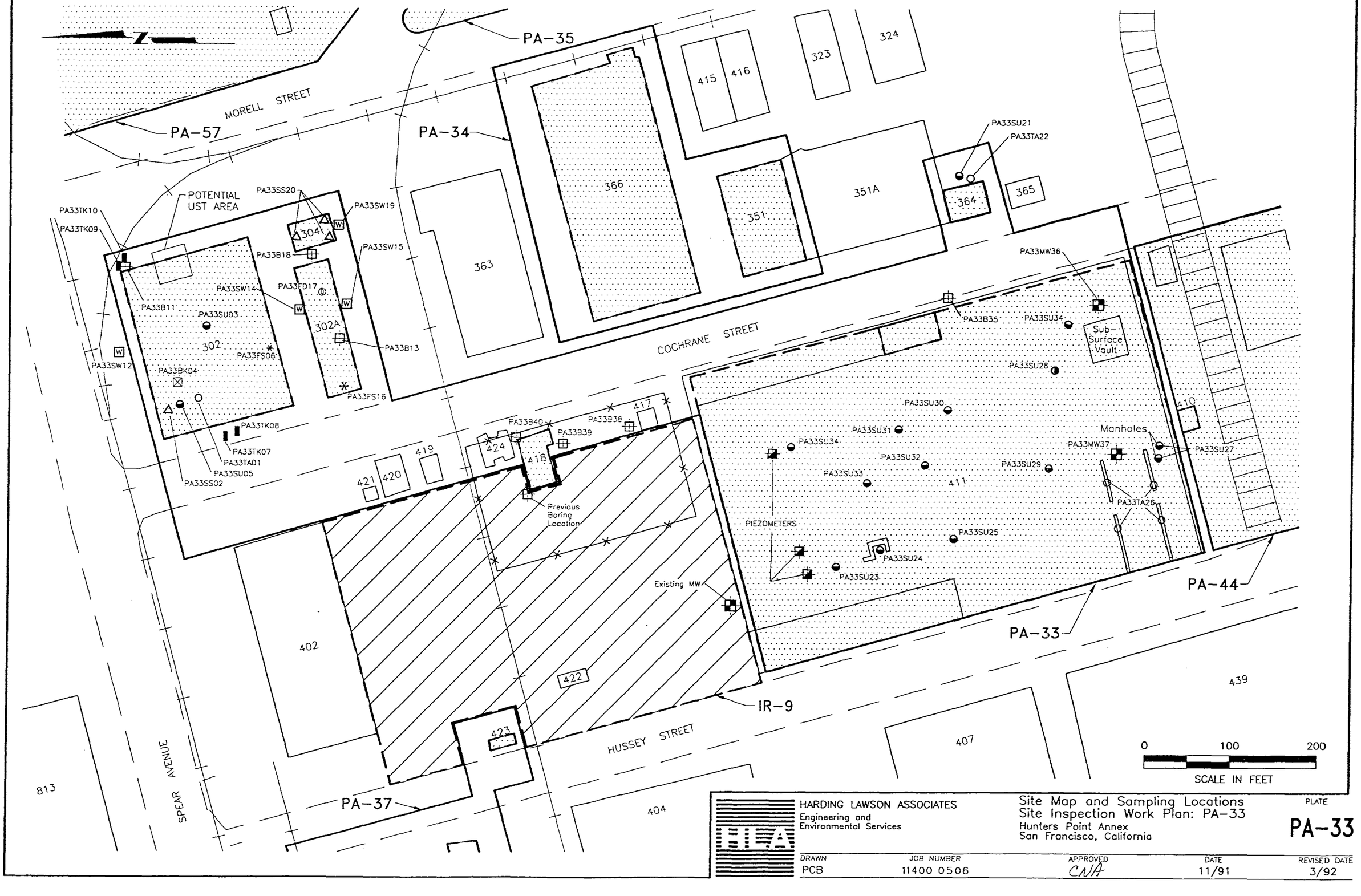
SUMMARY OF OBSERVATIONS:

Offices, equipment/parts storage, and a small repair shop exist inside the building. A flammable materials storage shed and solvent parts washer are present. Hydro-Chem operates on the associated paved area as well as adjacent paved areas and performs hose cleanout, maintenance, and staging. The pavement is discolored. Portions of the operational areas are within IR-9 and are under investigation.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	BTEX	VOC	SOC	MTL	OTHER
Soil in storage yard	PA33B38	3	3	3	3	3	3	3	
Soil in repair area near flammables, shed	PA33B39	3	3	3	3	3	3	3	
Soil in hose cleaning area	PA33B40	3	3	3	3	3	3	3	
TOTAL ANALYSES		9	9	9	9	9	9	9	



HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-33
Hunters Point Annex
San Francisco, California

PLATE
PA-33

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

HPAH0211 100.0
19920316.1403

EXHIBIT 34

PA: 34

BUILDING/AREA: 351

BUILDING/AREA NAME: Electronics Shop

HISTORICAL USE: Steam valve machine company

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Drums, containers, and oil-stained floor

SUMMARY OF OBSERVATIONS:

Portions of the first floor are covered with oil-soaked wood, indicating previous machinery operations. Drums and 5-gallon "flammable" cans are present inside. Photo etching and circuit board production occurred on the second floor. Bags of blue granular material are present; the material looks like copper sulfate.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Composite of drums on 1st floor	PA34DM01	4	4	4	4	4	4	
Blue granular material on 2nd floor	PA34BK02					1	1	SO_4
Soil beneath oil covered floor, east end	PA34B03	1	1	1	1	1	1	
Soil beneath oil covered floor, west end	PA34B04	1	1	1	1	1	1	
TOTAL ANALYSES		6	6	6	6	7	7	

EXHIBIT 34
(Continued)

PA: 34

BUILDING/AREA: 366

BUILDING/AREA NAME: Boat and Plastics Shop

HISTORICAL USE: Unknown

CURRENT USE: Metal sculpting, welding, metal fabrication, XN Welding (current tenant)

AREA/TYPE OF CONCERN: Leaking batteries, oil-stained soil and asphalt, oil stains leading to storm drains

SUMMARY OF OBSERVATIONS:

There are several oil-stained areas around the exterior of the building; some staining appears to have emanated from the building. Several stains lead directly to storm drains. There are also several areas where 55-gallon drums of unknown liquids are stored in the vicinity of storm drains.

PROPOSED WORK PLAN:

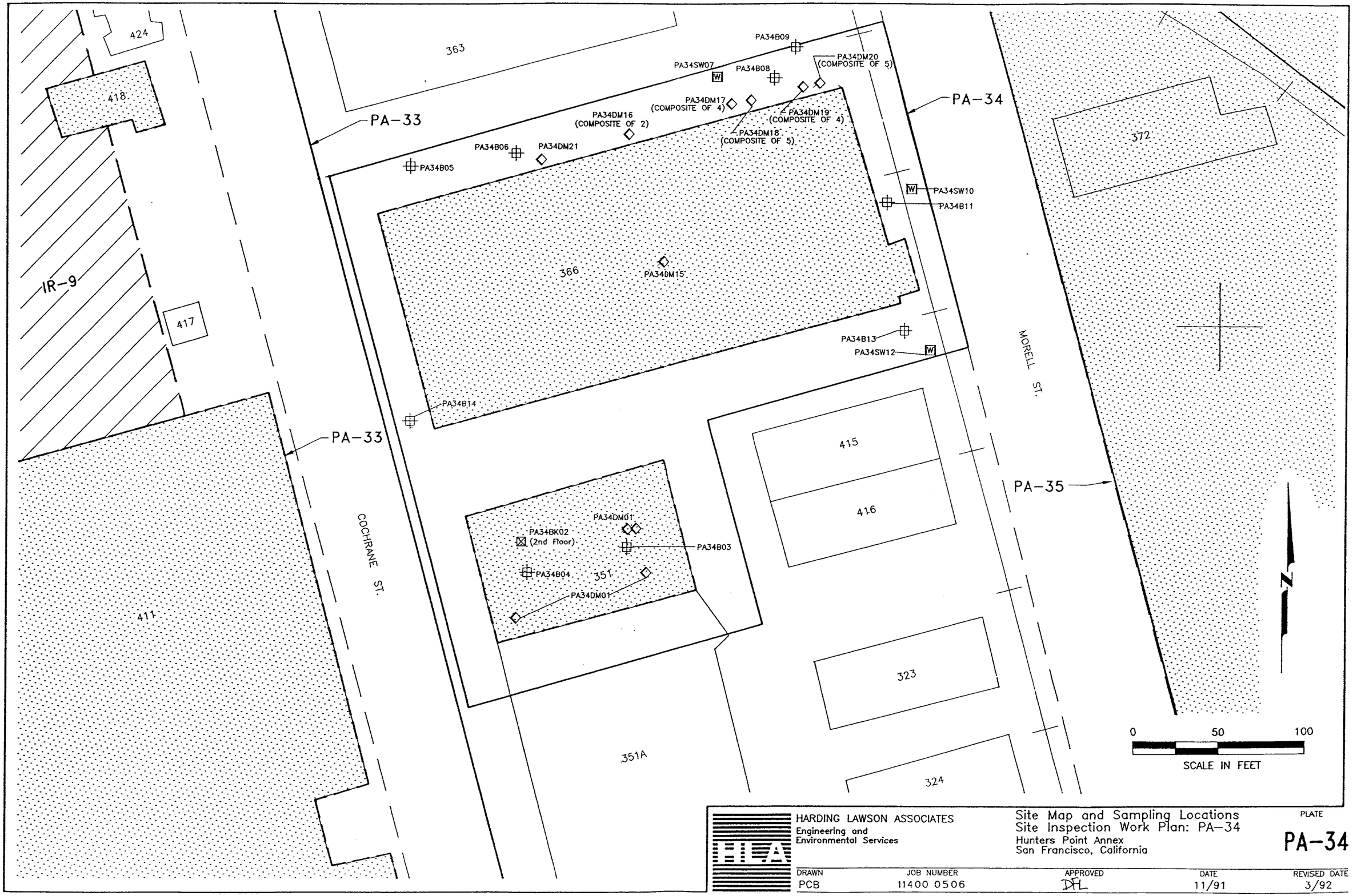
Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath batteries	PA34B05						2	Cl, SO_4 NO_3, PO_4
Oil-stained soil 75 feet from northwest corner of building (exterior)	PA34B06	3	3	3	3	3	3	
Storm drain	PA34SW07	1	1	1	1	1	1	
Oil-stained soil 75 feet from northeast corner	PA34B08	3	3	3	3	3	3	
Oil-stained soil under drums	PA34B09	3	3	3	3	3	3	
Storm drain	PA34SW10	1	1	1	1	1	1	
Soil below stain leading to storm drain	PA34B11	3	3	3	3	3	3	
Storm drain	PA34SW12	1	1	1	1	1	1	
Soil below stain leading to storm drain	PA34B13	3	3	3	3	3	3	
Soil below stain from under southwest corner of building	PA34B14	3	3	3	3	3	3	
Drum with "MEK" label	PA34DM15	1	1	1	1	1	1	
Composite of 2 drums	PA34DM16	1	1	1	1	1	1	
Composite of 4 drums containing soil	PA34DM17	1	1	1	1	1	1	
Composite of 5 drums containing soil	PA34DM18	1	1	1	1	1	1	

EXHIBIT 34
(Continued)

BUILDING/AREA: 366 (continued)							
Composite of 4 drums	PA34DM19	1	1	1	1	1	1
Composite of 5 drums	PA34DM20	1	1	1	1	1	1
Drum contents	PA34DM21	1	1	1	1	1	1
TOTAL ANALYSES		28	28	28	28	28	30

26540



HPAH0212 50.0
1992041S.1318

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-34
Hunters Point Annex
San Francisco, California

PLATE
PA-34

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	DFL	11/91	3/92

EXHIBIT 35

PA: 35

BUILDING/AREA: 274

BUILDING/AREA NAME: Decontamination Training

HISTORICAL USE: Unknown

CURRENT USE: Artist / photography studio

AREA/TYPE OF CONCERN: Floor drains, dark pavement stain on south side

SUMMARY OF OBSERVATIONS:

A pipe from a raised sump in the building drains to a floor drain. A series of in-line floor drains traverses the northeast edge of the building. A dark stain was observed on the pavement outside a garage door on the southwest side. A subsurface vault outside the building on the northeast side contains an unknown liquid. There was no evidence of photochemical use.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Floor drain beneath pipe in sump	PA35FD01	1	1	1	1	1	1	
Composite series of floor drains along northeast side	PA35FD02	1	1	1	1	1	1	
Soil beneath stain on pavement on southwest side	PA35SS03	1	1	1	1	1	1	
Contents of vault on northeast exterior	PA35SU04	1	1	1	1	1	1	
Soil adjacent to vault	PA35B05	3	3	3	3	3	3	
TOTAL ANALYSES		7	7	7	7	7	7	

PA: 35

BUILDING/AREA: 306

BUILDING/AREA NAME: Substation "I," SO-3

HISTORICAL USE: Electrical substation

CURRENT USE: Electrical substation

AREA/TYPE OF CONCERN: PCB transformer leaks, sandblast material

SUMMARY OF OBSERVATIONS:

One large transformer with PCBs exists in the building over a gravel bed; the gravel is stained. It is unknown whether there is containment beneath the gravel. There is an unnumbered shack on skids behind the substation. Sand in and around the shack may be sandblast waste.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Stained gravel beneath transformer	PA35SS06			1				
Composite of sand in and around shack	PA35SB07					1	1	CN
TOTAL ANALYSES				1		1	1	

PA: 35

BUILDING/AREA: Area bounded by Manseau, Morell, and E Streets

BUILDING/AREA NAME: Not applicable

HISTORICAL USE: Unknown

CURRENT USE: Storage

AREA/TYPE OF CONCERN: Stained soil, sandblast material, and storm drain

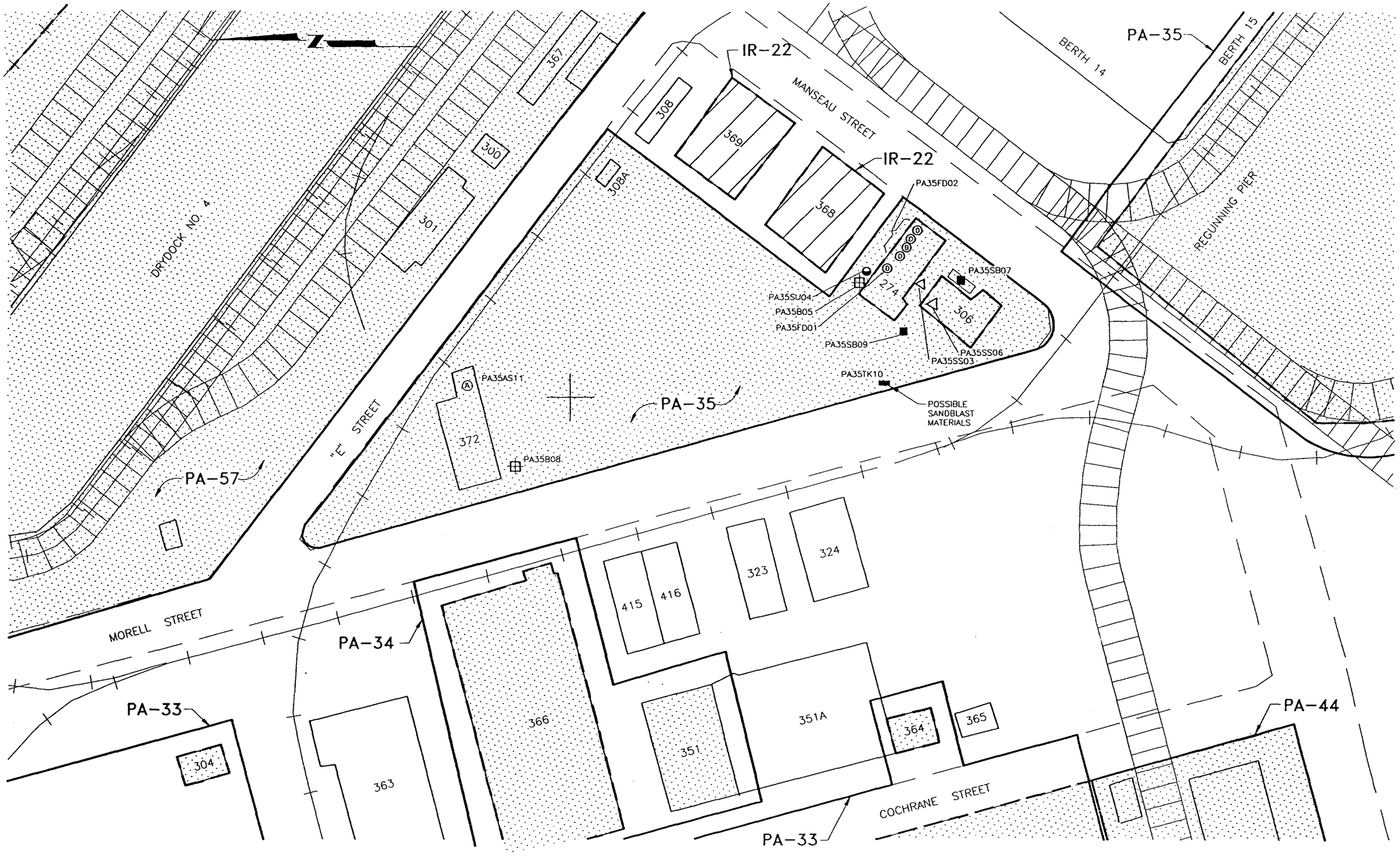
SUMMARY OF OBSERVATIONS:

The area is fenced and presently used for storage. A wooden building near the north part of the site contains possible asbestos stored in a box. A large metal box has an oily stain on the soil below it. Cylindrical hoppers in the southwest part of site contain black sand. This sand-like material appears to be granular obsidian but could be a metallic or plastic composite. Sand that may be sandblast material covers much of an area near the hoppers.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath metal box and stain	PA35B08	3	3	3	3	3	3	
Sandblast material composite	PA35SB09					1	1	CN
Composite black material in hoppers	PA35TK10					1	1	
Suspected asbestos material	PA35AS11							A
TOTAL ANALYSES		3	3	3	3	5	5	



HPAH0213 100.0
19920314.1709

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-35
Hunters Point Annex
San Francisco, California

PLATE
PA-35

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CWH	11/91	3/92

EXHIBIT 37

PA: 37

BUILDING/AREA: 401

BUILDING/AREA NAME: Public Workshop, S-03 & S-07

HISTORICAL USE: Portion used as print shop, remainder unknown

CURRENT USE: Cabinet-building shop, metal fabrication, sheet metal shop, furniture storage, artists' studios

AREA/TYPE OF CONCERN: Storage drum

SUMMARY OF OBSERVATIONS:

The northeast portion of the building is a former print shop. Lacquer thinner and contact adhesive are stored in a metal cabinet in the sheet metal shop. A baghouse is present at the southwest corner of the building. The area along the north side of the building appears to be a dumping area for old computer and electronics equipment. One 55-gallon drum, approximately one-third full of an unidentified substance, is present on the north side of the building. Evidence of staining and runoff to a storm drain near the northeast corner was observed.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Storm drain near northeast corner	PA37SW01	1	1	1	1	1	1	
Particulates in baghouse	PA37BK02					1	1	CN
Contents of drum	PA37DM03	1	1	1	1	1	1	
TOTAL ANALYSES		2	2	2	2	3	3	

PA: 37

BUILDING/AREA: 423

BUILDING/AREA NAME: Compressor Hut and Paint Storage, S-11

HISTORICAL USE: Unknown; likely contained an air compressor for spray-painting operations

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Near Pickling and Plate Yard

SUMMARY OF OBSERVATIONS:

The building is near Site IR-9 where a soil and groundwater investigation is ongoing. The building is labeled "Flammable Storage," indicating its use at one time. The building is now empty. No further sampling or analyses are recommended at this time.

PA: 37

BUILDING/AREA: 435

BUILDING/AREA NAME: Equipment Storage, S-07

HISTORICAL USE: Unknown

CURRENT USE: Furniture, metal paint, and vehicle storage; paint booth

AREA/TYPE OF CONCERN: Painting operation

SUMMARY OF OBSERVATIONS:

A painting operation and chemical storage exist in the building. A white-stained area on the pavement appears to drain from the building to the storm drain on the west end. Current tenants of the building report that this storm drain backs up after storms. An exposed patch of soil on the north side of the building may have received runoff. A sump/vault is located in the east portion of the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Exposed soil	PA37SS04	1	1	1	1	1	1	
Storm drain	PA37SW05	1	1	1	1	1	1	
Contents of sump/vault	PA37SU06	1	1	1	1	1	1	
TOTAL NUMBER OF SAMPLES		3	3	3	3	3	3	

PA: 37

BUILDING/AREA: 436

BUILDING/AREA NAME: Material Storage, S-07

HISTORICAL USE: Painting and paint storage

CURRENT USE: Storage of wood and building materials, small workshop area

AREA/TYPE OF CONCERN: Paint and solvents on floor

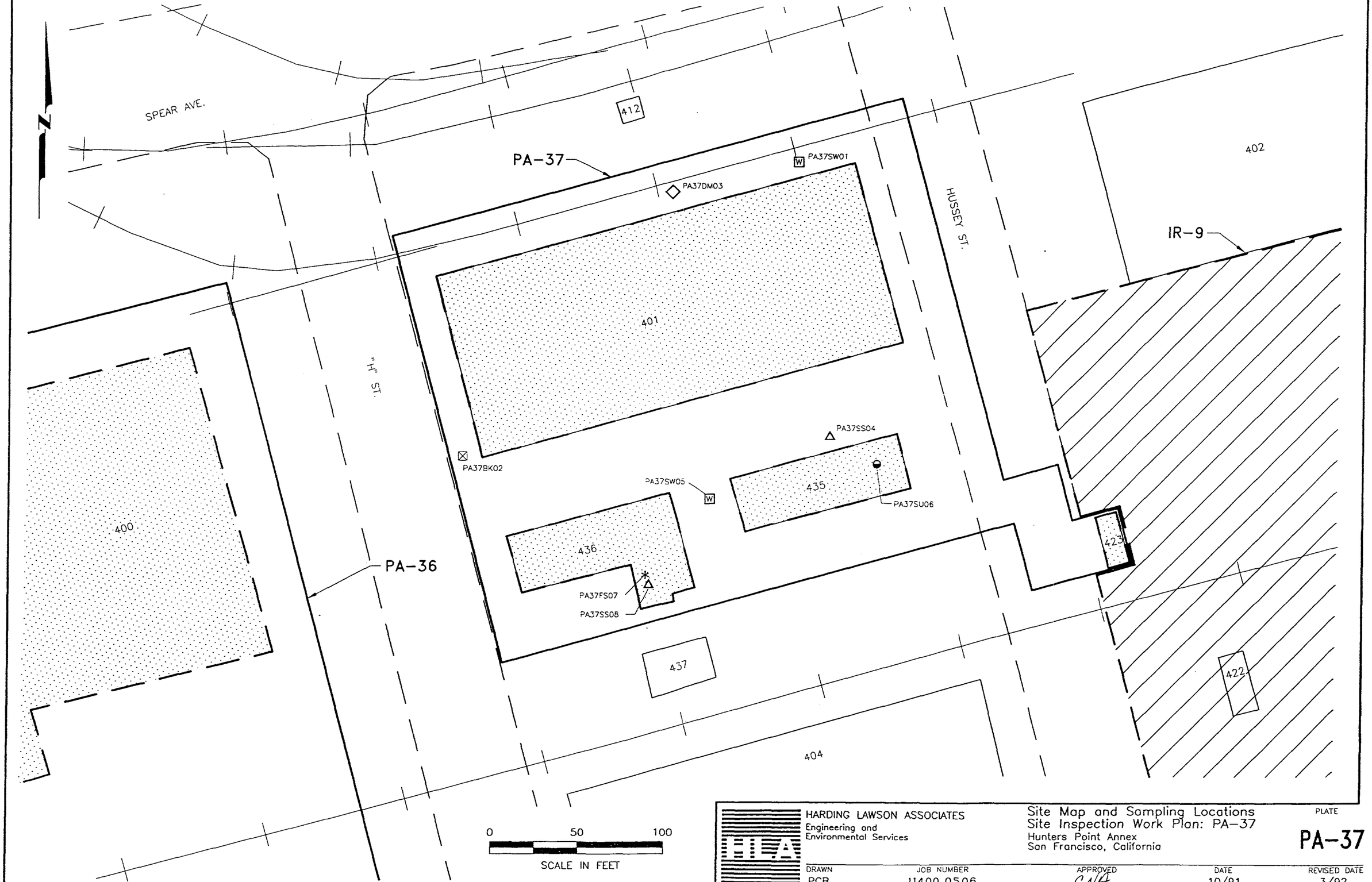
SUMMARY OF OBSERVATIONS:

Painting and paint storage existed at the east end of building. The remainder of the building is used for lumber storage or houses workshops. Concrete flooring in Building 436 was cracked and damaged.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Floor of paint storage area	PA37FS07	1	1	1	1	1	1	
Soil under deteriorated concrete	PA37SS08	1	1	1	1	1	1	
TOTAL ANALYSES		2	2	2	2	2	2	



HPAH0214 50.0
19920316.1352

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-37
Hunters Point Annex
San Francisco, California

PLATE
PA-37

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

PA: 38

BUILDING/AREA: 500

BUILDING/AREA NAME: CPO Barracks

HISTORICAL USE: Barracks

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: None

SUMMARY OF OBSERVATIONS:

These are abandoned two-story barracks with no evidence of present or past use of hazardous materials. Removal of a UST behind the building (southeast corner) was in progress during HLA's visit. Soil sampling beneath an aboveground tank was recommended in Appendix A, Table 4. No evidence of the aboveground storage tank or stained soil was observed. Paint chips were observed on the soil beneath the exterior walls.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Composite of soil containing paint chips at base of exterior walls	PA38SS01						1	
TOTAL ANALYSES							1	

PA: 38

BUILDINGS: 506 - Radiological Research/Housing, Navy Exchange & ROICC offices
507 - Radiological Research/Public Works Office
509 - Radiological Research/Library
510 - Radiological Research/Naval Investigation Service

HISTORICAL USE: Unknown

CURRENT USE: Buildings have been demolished

AREA/TYPE OF CONCERN: None observed

SUMMARY OF OBSERVATIONS:

These buildings have been demolished. There is no evidence of hazardous materials; however, as cited in Appendix A soil sampling was recommended near Buildings 506 and 507. Analyses were not specified. IR-14 and PA-38 boundaries overlap at the Building 506 and 510 footprints; sampling has been performed as part of RI activities at IR-14. Analytical results will be used to assess the need for further investigations in these areas. Any further investigation will be addressed as part of RI activities in IR-14. Building names suggest the possible presence of radiation at these sites (see Section 2.3.5).

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Building 507 area	PA38B02	2	2	2	2	2	2	
TOTAL ANALYSES		2	2	2	2	2	2	

PA-38

PA-39

IR-13

IR-2

IR-14

MANSEAU ST.

"I" ST.

"H" ST.

HUSSEY ST.

"J" ST.

"K" ST.

709

500

PA38SS01

522

519

501

502

503

803

524

505

403

PA38B02

507 (D)

506

512

517(D)

509 (D)

516

506 (D)

520

510A

518

510 (D)

515

511

0 100 200

SCALE IN FEET

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-38
Hunters Point Annex
San Francisco, California

PLATE
PA-38

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CWA	10/91	3/92

HPAH0215 100.0
19920319.1143

EXHIBIT 40

PA: 40

BUILDING/AREA: 527

BUILDING/AREA NAME: Substation

HISTORICAL USE: Substation

CURRENT USE: Substation

AREA/TYPE OF CONCERN: Transformers, electrical switches

SUMMARY OF OBSERVATIONS:

Three unlabeled transformers and a multiphase electric switch box in the building were observed to have leaked onto the building's foundation.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Concrete beneath transformer	PA40FS01			1				
TOTAL ANALYSES				1				

PA: 40

BUILDING/AREA: Pier 2

BUILDING/AREA NAME: Not applicable

HISTORICAL USE: Ship berths

CURRENT USE: Ship berths

AREA/TYPE OF CONCERN: 55-gallon, 10-gallon, and 5-gallon containers

SUMMARY OF OBSERVATIONS:

Several 55-gallon petrochemical drums were present on the south side of Building 527. Five- and 10-gallon containers of petrochemicals were also present between Berths 34 and 35. The entire pier is over water and covered with asphalt. No significant stains or other problems were identified on the pier. Utility lines under the pier may pose an environmental threat to Bay water depending on their contents and integrity. No sampling is recommended; however, storage containers should be properly labelled identifying their contents and stored appropriately if hazardous.

IR-17

BERTH 29

IR-2

HPA FACILITY BOUNDARY

PA-40

PA40FS01

BERTH 30

BERTH 31

BERTH 32

PIER 2

527

BERTH 33

BERTH 34

BERTH 35

BERTH 36

0 100 200

SCALE IN FEET

HPAH0216 1000
19920314.1713

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-40
Hunters Point Annex
San Francisco, California

PLATE
PA-40

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

EXHIBIT 41

PA: 41

BUILDING/AREA: 816

BUILDING/AREA NAME: NRDL High Voltage Accelerator/Radiological Defense Laboratory

HISTORICAL USE: Unknown

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Radiation

SUMMARY OF OBSERVATIONS:

No evidence of chemical use in the building was observed. A round subsurface concrete pit is present on the east end of the building. It apparently did not contain liquids, because electrical lights were built into the walls. No sampling is recommended. The building title suggests the possible presence of radiation at this site (see Section 2.3.5).

PA: 41

BUILDING/AREA: 818

BUILDING/AREA NAME: Chlorination Plant

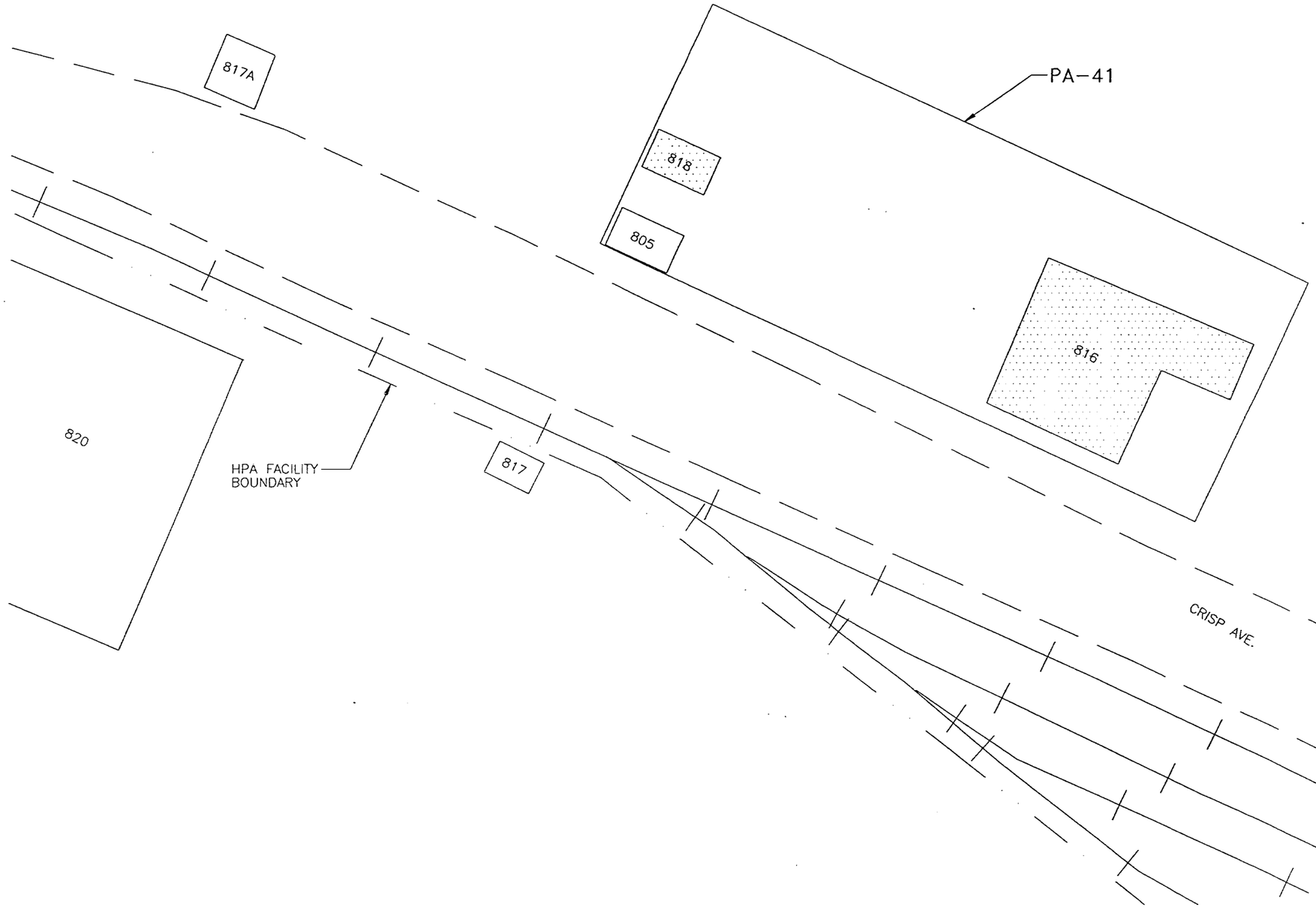
HISTORICAL USE: Unknown

CURRENT USE: None, building demolished

AREA/TYPE OF CONCERN: Color variations in soil

SUMMARY OF OBSERVATIONS:

This is a small shack with a concrete foundation. A 1971 HPA map (*HLA, 1990b*) shows a circle adjacent to the shack, which is assumed to be a chlorine tank for water treatment. The tank is now gone. No indications of nearby soil impacts were observed. No sampling is recommended.



0 50 100

SCALE IN FEET

HPAH0217 50.0
19920316.1337

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-41
Hunters Point Annex
San Francisco, California

PLATE
PA-41

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

EXHIBIT 42

PA: 42

BUILDING/AREA: 109

BUILDING/AREA NAME: Harbor Sales and Leasing; Police Station

HISTORICAL USE: Police Station

CURRENT USE: Sales and leasing office/real estate office

AREA/TYPE OF CONCERN: Oil/water mixture reservoir

SUMMARY OF OBSERVATIONS:

This building appears to house offices. No evidence of use of hazardous materials was observed. Table 3 in Appendix A indicated that an "oil/water mixture reservoir" with a capacity of approximately 100 gallons was abandoned. No evidence of the reservoir was observed.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation around the building perimeter to assess whether the reservoir remains onsite below ground.

Task 2. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath reservoir	PA42B01	2	2	2	2	2	2	
TOTAL ANALYSES		2	2	2	2	2	2	

PA: 42

BUILDING/AREA: 113

BUILDING/AREA NAME: Tug and Sub Maintenance, Salvage Divers, Substation 5

HISTORICAL USE: Machine shop, torpedo maintenance shop, offices, and electrical substation

CURRENT USE: Portions of southwest side of building used as storage areas; remainder of building is unoccupied

AREA/TYPE OF CONCERN: Oil and grease, chemically pitted floor stains

SUMMARY OF OBSERVATIONS:

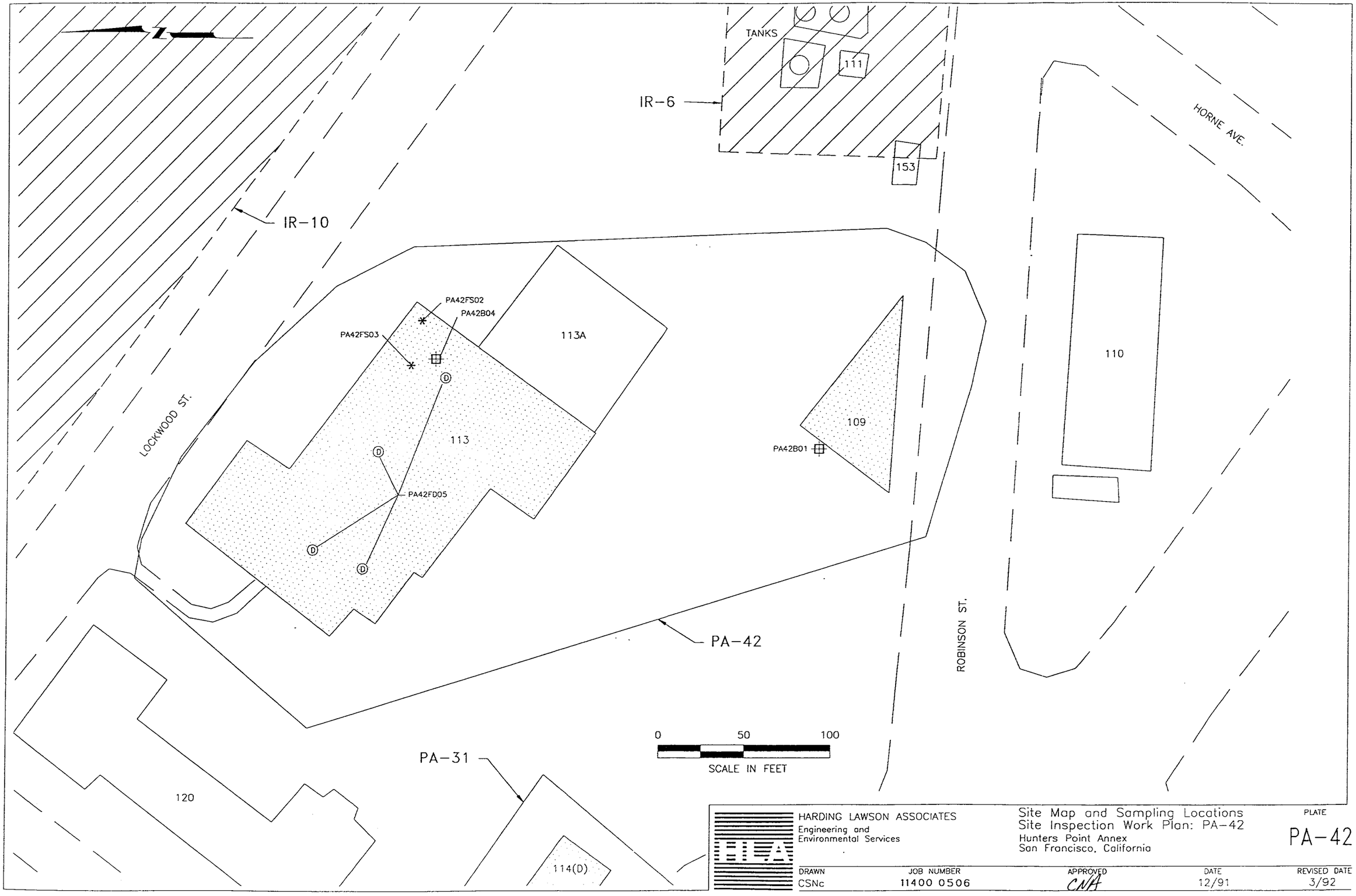
Several grease or chemical stains were observed on the floor in the southeast corner of the building near a sink. Some solid chemical residue is also present. The floor in the stained area is pitted and damaged. Floor drains may contain oil and other residue. One floor drain in a restroom is clogged, and water is backed up on the floor. A partly disassembled torpedo was observed near the center of the building; however, no associated leaks or evidence of release were observed. Several large oil-covered lathes are in the south end of the building. Some X-ray equipment (apparently belonging to the tenants of 113A) is stored on the west side. On the building's west exterior side is a sign indicating "Radiation Area" (see Section 2.3.5). A substation on the west side contains a power switch labelled "diesel oil," which could be associated with a UST. No UST(s) is listed in the removal or closure program. The sump described in Appendix A was not observed.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation to locate a possible UST.

Task 2. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
At pitted, chemical stained area adjacent to sink	PA42FS02	1	1	1	1	1	1	
Grease stain area	PA42FS03	1	1	1	1	1	1	
Soil boring at crack in concrete	PA42B04	3	3	3	3	3	3	
Contents of floor drains: composite	PA42FD05	1	1	1	1	1	1	
TOTAL ANALYSES		6	6	6	6	6	6	



HPAH0218 50.0
19920702.0916

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-42
Hunters Point Annex
San Francisco, California

PLATE
PA-42

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
CSNc	11400 0506	CNA	12/91	3/92

PA: 43

BUILDING/AREA: 906

BUILDING/AREA NAME: Gardening Tool House

HISTORICAL USE: Storage, repair of gardening tools, pesticide mixing

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Soil

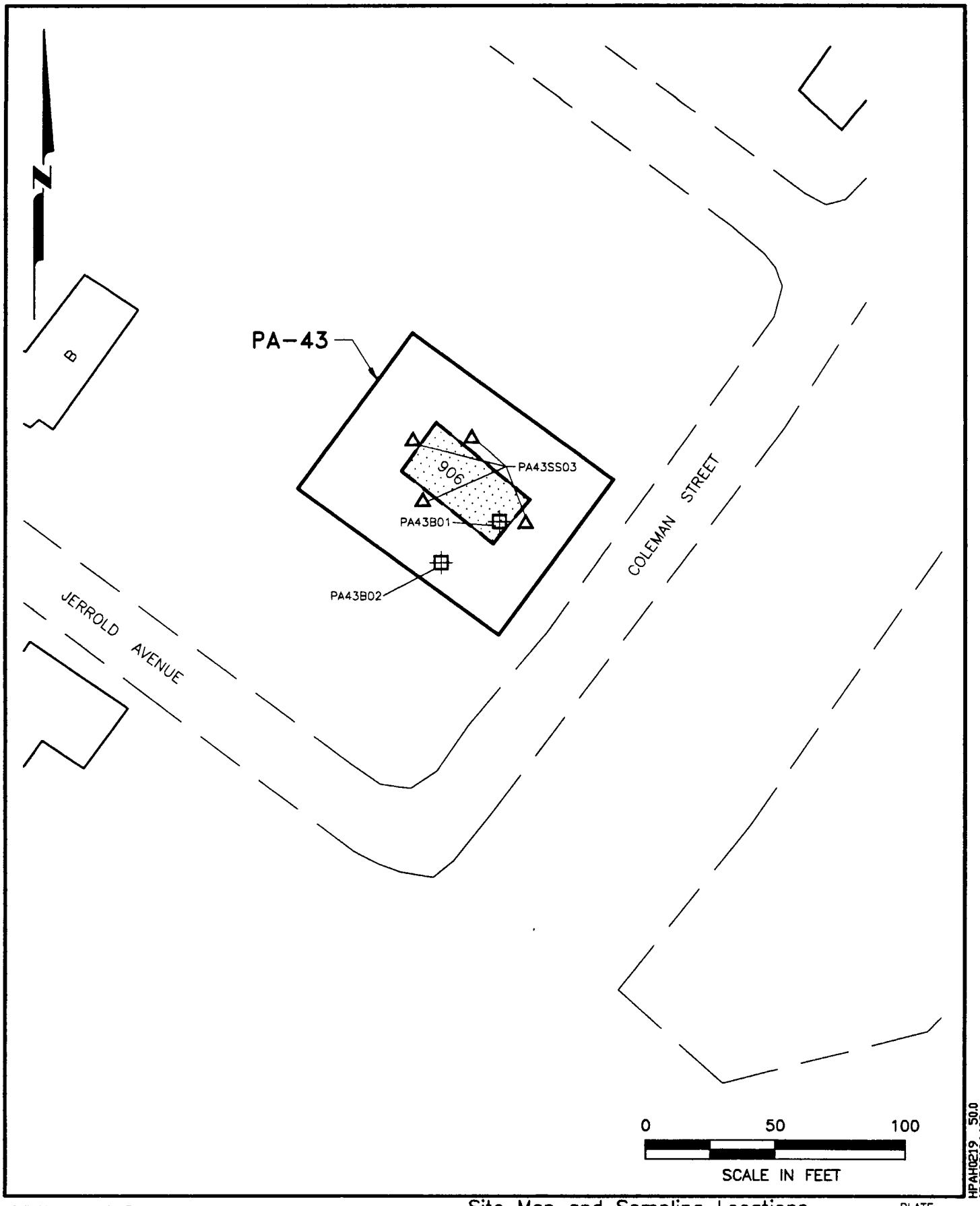
SUMMARY OF OBSERVATIONS:

Building was used to store gardening and landscaping equipment. Rubble has been dumped around the edge of the building. Signs in the dirt-floored room indicate that pesticides and fertilizers were stored and mixed in the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Shed	PA34B01	1	1	1	1	1	1	Organochlorine Pesticides
Trash Area	PA34B02	1	1	1	1	1	1	Organochlorine Pesticides
Composite of soil containing paint chips at base of exterior walls	PA34SS03						1	Organochlorine Pesticides
TOTAL ANALYSES		2	2	2	2	2	3	



HPAH0219 50.0
19920316.1409

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-43
Hunters Point Annex
San Francisco, California

PLATE
PA-43

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

EXHIBIT 44

PA: 44

BUILDING/AREA: Area near Buildings 408, 409, 410

BUILDING/AREA NAME: Not applicable

HISTORICAL USE: Apparently for welding

CURRENT USE: Demolished

AREA/TYPE OF CONCERN: Sandblast material and debris

SUMMARY OF OBSERVATIONS:

Buildings 409 and 410 housed generators for welding. Building 411, adjacent to the north, housed a large metals machining operation. There was evidence of sandblasting activity in Building 438 and a nearby unnumbered building. A large crane track ran through the area, indicating that large items could have been brought into the area for welding and sandblasting. Four storm drains observed in the area could likely have received sandblast materials for a number of years. No indication of liquid releases on the concrete-covered area were observed.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Sandblast Material Composite	PA44SB01					1	1	CN
Storm Drains Composite	PA44SW02	1	1	1	1	1	1	CN
Storm Drain	PA44SW03	1	1	1	1	1	1	CN
TOTAL ANALYSES		2	2	2	2	3	3	

PA: 44

BUILDING/AREA: 438

BUILDING/AREA NAME: Metal Spray Shelter, S-11

HISTORICAL USE: Sandblasting

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Sandblast waste

SUMMARY OF OBSERVATIONS:

Evidence of sandblasting activity was observed in the building. A sealed blasting hood is present.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Sandblast Material Composite	PA44SB04					1	1	CN
TOTAL ANALYSES						1	1	

N

PA-33

411

410

PA44SW03

AREA NEAR
BLDGS 408, 409,
AND 410

PA44SB01

UNNUMBERED
SANDBLAST
BUILDING

439

OVEN CAR

PA44SW02

408

409

PA44SB01

438

PA44SB04
(COMPOSITE)

PA-44

MANSEAU ST.

502

0 50 100

SCALE IN FEET

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-44
Hunters Point Annex
San Francisco, California

PLATE
PA-44

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

HPAH0220 50.0
19920702.0902

EXHIBIT 51

PA: 51

BUILDING/AREA: Former Locations of PCB-Containing Transformers

BUILDING/AREA NAME: See attached table

HISTORICAL USE: PCB-containing transformers

CURRENT USE: Not applicable

AREA/TYPE OF CONCERN: Presence of PCBs from releases prior to transformer removal

SUMMARY OF OBSERVATION:

The following table summarizes information presented in Appendix E of the PA Other Areas/Utilities Report (*HLA, 1990b*) regarding PCB-containing transformers removed from HPA by AEMC prior to YEI Engineering, Inc.'s sampling survey in 1989 (*YEI, 1989*). The table lists 118 PCB-containing transformers removed. Appendix E contains Navy files including notes, lists, and other records of transformer inventory and removal activities at HPA.

Records in Appendix E listed 48 PCB-containing transformers removed from "Building 524 Yard." It is likely that transformers from several areas were removed and stored near Building 524 and then removed from HPA at a later date. Correlation of removal lists with inventory lists may enable identification of original locations for removed transformers.

PROPOSED WORK PLAN:

Task 1. Inspect each identifiable former location of a PCB-containing transformer for evidence of oil stains.

Task 2. When oil stains are observed, collect an appropriate single or composite sample of the stained matrix and analyze for PCBs. Appropriate samples, chosen in the field, may include surface wipes, surface soils, bulk samples, or floor scrapes.

EXHIBIT 51 (CONTINUED)

Harding Lawson Associates

Location/ Building No.	Substation	Serial Number	Status	Comments
125		PVC8539-15	AEMC (R)	Outside building
129	U-2		(R)	
129	U-2		(R)	
129		7148303	AEMC (R)	Outside building
129		7148306	AEMC (R)	Outside building
131	U		(R)	
132	U-1		(R)	
132	U-1		(R)	
132		7148301	AEMC (R)	Outside building
132		7148305	AEMC (R)	Outside building
156		6355326	AEMC (R)	
211		3260796	AEMC (R)	Front of Shop 51
211		3260795	AEMC (R)	
211		3260794	AEMC (R)	Front of Shop 51
214	GH-4	24578	AEMC (R)	
214	GH-4	24579	AEMC (R)	
214	GH-4	24580	AEMC (R)	
214	GH-4		(R)	
214	GH-4		(R)	
214	GH-4		(R)	
219	E	1807692	AEMC (R)	
219	E	1791711	AEMC (R)	
219	E		(R)	
219	E		(R)	
219	E-2	PCV8539-12	AEMC (R)	
219	E-3	PVC8539-06	AEMC (R)	
253		05154-45-A8	AEMC (R)	outside caged area near bomb shelter
253		05154-19-A8	AEMC (R)	outside caged area near bomb shelter
253		05154-24-A8	AEMC (R)	outside caged area near bomb shelter
253		05154-51-A8	AEMC (R)	outside caged area near bomb shelter
270		7335933	AEMC (R)	Area 6
270		7335952	AEMC (R)	7335951
270		7335951	AEMC (R)	
273	GH-2	7148302	AEMC (R)	
273	GH-2		(R)	
411	Y		(R)	
524		2072107	AEMC (R)	
524		No Serial # I.D. #7	AEMC (R)	
524		No Serial # I.D. #26	AEMC (R)	
524		54627	AEMC (R)	
524		2Xnoplate#25	AEMC (R)	
524		7093073	AEMC (R)	
524		7093066	AEMC (R)	

Location/ Building No.	Substation	Serial Number	Status	Comments
524		7093067	AEMC (R)	
524		6337033	AEMC (R)	
524		6337032	AEMC (R)	
524		3266252	AEMC (R)	
524		6337035	AEMC (R)	
524		3265189	AEMC (R)	
524		2310	AEMC (R)	
524		569018	AEMC (R)	
524		3264489	AEMC (R)	
524		3265947	AEMC (R)	
524		64316	AEMC (R)	
524		6325891	AEMC (R)	
524		7089398	AEMC (R)	
524		6591193	AEMC (R)	
524		7089397	AEMC (R)	
524		3264686	AEMC (R)	
524		3165484	AEMC (R)	
524		73149	AEMC (R)	
524		6991264	AEMC (R)	
524		67517	AEMC (R)	
524		No Serial # I.D. #22	AEMC (R)	
524		70583	AEMC (R)	
524		70584	AEMC (R)	
524		70595	AEMC (R)	
524		3264479	AEMC (R)	
524		2677065	AEMC (R)	
524		163247	AEMC (R)	
524		152007	AEMC (R)	
524		152006	AEMC (R)	
524		7224027	AEMC (R)	
524		7224028	AEMC (R)	
524		7221845	AEMC (R)	
524		7221846	AEMC (R)	
524		4306507	AEMC (R)	
524		7221844	AEMC (R)	
524		37764	AEMC (R)	
524		2677067	AEMC (R)	
524		2049399	AEMC (R)	
524		400411	AEMC (R)	
524		6991264	AEMC (R)	
524		7224031	AEMC (R)	
525		7376576	AEMC (R)	Outside building
*		63513	AEMC (R)	Below and welded to metal casing

Location/ Building No.	Substation	Serial Number	Status	Comments
*		63659	AEMC (R)	Below and welded to metal casing
*		61853	AEMC (R)	Below and welded to metal casing
*		67518	AEMC (R)	
*		88H597-A2	AEMC (R)	
*		4306501	AEMC (R)	
*		3010658	AEMC (R)	
*		3010651	AEMC (R)	
219/211		C862218B	AEMC (R)	Outside building
253-231		S-473	AEMC (R)	
253-231		S-470	AEMC (R)	
253/211		7662651	AEMC (R)	in fence around bomb shelter
253/211		7662644	AEMC (R)	in fence around bomb shelter
253/211		7662649	AEMC (R)	in fence around bomb shelter
530 lot		6550979	AEMC (R)	
B-156			(R)	
B-523			(R)	
DD#7 MH 331		3621-1	AEMC (R)	
DD#7 MH 148		7338453	AEMC (R)	
S. Pier	0-2	PCB853960	AEMC (R)	
S. Pier	0-21	PCV8539-01	AEMC (R)	
S. Pier	0-3	PCV8539-04	AEMC (R)	
S. Pier	0-34	PCV8539-18	AEMC (R)	
S. Pier, Berth 14		7081646	AEMC (R)	
	205	20233	AEMC (R)	Outside building
	I-5	64298	AEMC (R)	
	I-5	64296	AEMC (R)	
	MH 148		(R)	
	MH 331		(R)	
	MH 332		(R)	
	MH 603	No Serial #	AEMC (R)	

(R) Removed

* No location specified

Information from: *Navsea Project 1987/88 PCB Transformer Equipment Removal by AEMC From Hunters Point Annex*

EXHIBIT 52

PA: 52

BUILDING/AREA: Railroad Right-of-Way

BUILDING/AREA NAME: Not applicable

HISTORICAL USE: Railway; products transported are unknown

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Various waste dumping, soil staining

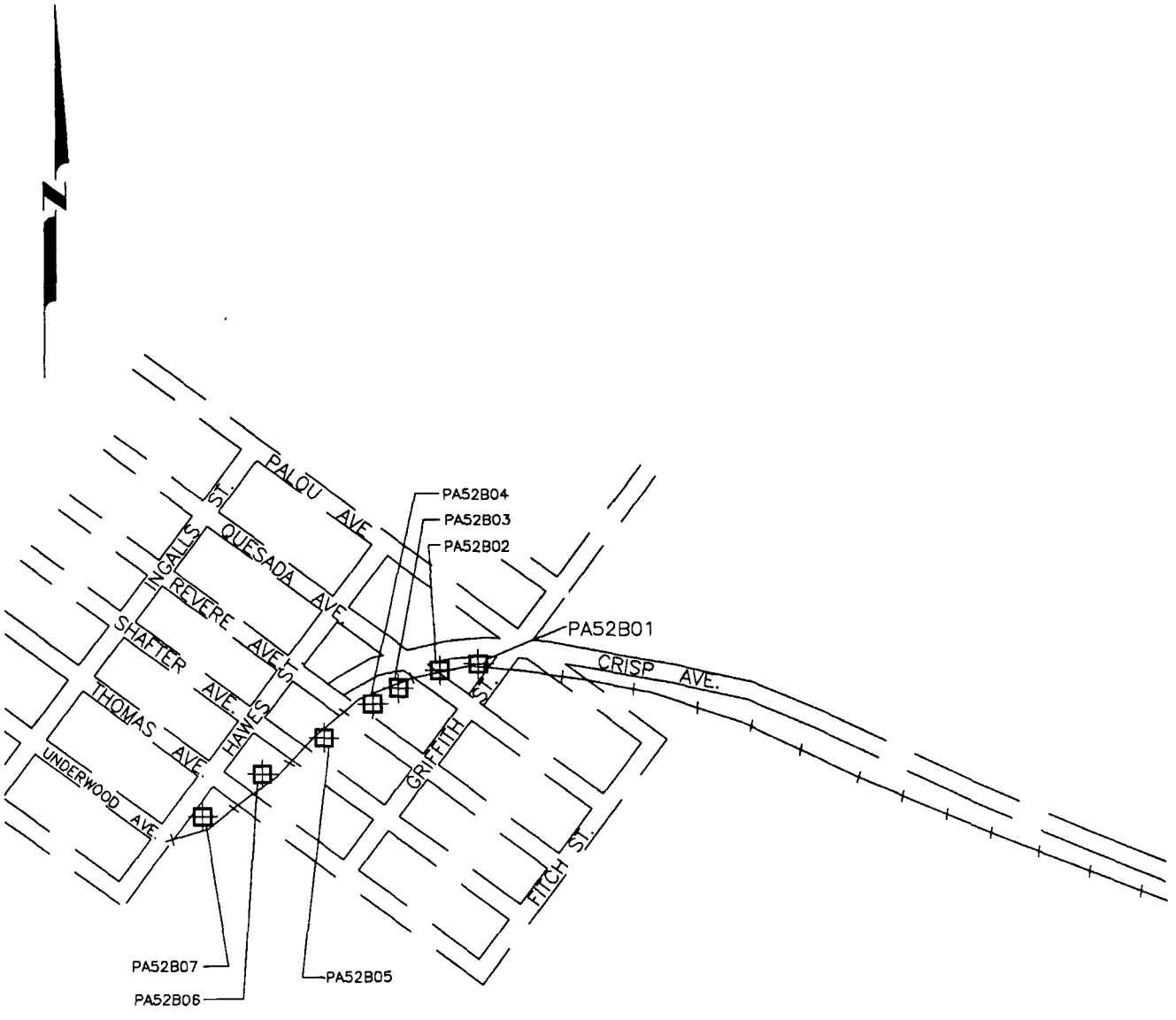
SUMMARY OF OBSERVATIONS:

Several small businesses are located along this right-of-way. Dumped household items such as 5-gallon containers of paint, resins, and unidentified materials, oil and paint spills, and automotive parts were observed in several areas. The track leads to a lumber transfer yard. PCP may have been used to treat the lumber as well as the railroad ties. Shallow borings are recommended.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Oil Stain	PA52B01	1	1	1	1	1	1	PCP
Oil Stain	PA52B02	1	1	1	1	1	1	PCP
Beneath leaking containers	PA52B03	1	1	1	1	1	1	PCP
Oil Stain	PA52B04	1	1	1	1	1	1	PCP
Between Revere and Shafter Avenues	PA52B05	1	1	1	1	1	1	PCP
Between Shafter and Thomas Avenues	PA52B06	1	1	1	1	1	1	PCP
South of Thomas Avenue	PA52B07	1	1	1	1	1	1	PCP
TOTAL ANALYSES		7	7	7	7	7	7	



NOT TO SCALE

HPAH0221 50.0
19920702.0904

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-52
Hunters Point Annex
San Francisco, California

PLATE
PA-52

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	12/91	3/92

EXHIBIT 53

Harding Lawson Associates

PA: 53

BUILDING/AREA: 525

BUILDING/AREA NAME: Storehouse, Code 1029

HISTORICAL USE: Unknown

CURRENT USE: Storage

AREA/TYPE OF CONCERN: Floor stains

SUMMARY OF OBSERVATIONS:

The interior of the building is divided into cage-style holding areas. Containers of adhesives, joint compound, paint, emulsions, and other unknown materials are present in these holding areas. Minor floor stains were observed near two holding areas. Two monitoring wells installed as part of the SI at PA-16 (*HLA, 1992*) are present approximately 25 feet northwest of the building. A summary of groundwater analytical data for metals is included in this exhibit. (No organics were detected in samples from these wells.) Organic compounds were not detected. Grease-containing electrical winches for wrapping and tightening ship lines are on the ground.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Chemical spills on floor	PA53FS01	1	1	1	1	1	1	
Chemical spills on floor	PA53FS02	1	1	1	1	1	1	
Soil beneath winches	PA53SS03	1	1	1	1	1	1	
Soil beneath winches	PA53SS04	1	1	1	1	1	1	
TOTAL ANALYSES		4	4	4	4	4	4	

PA: 53

BUILDING/AREA: 530

BUILDING/AREA NAME: Public Works Building; Automotive Hobby Shop

HISTORICAL USE: Unknown, automotive repair

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Floor stains, stains on pavement

SUMMARY OF OBSERVATIONS:

The building has overhead garage doors on either side indicating historical automotive repair activities. Two minor chemical stains were observed on the floor. Large oil stains are present on damaged asphalt pavement at the northeast and southwest ends of the building.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

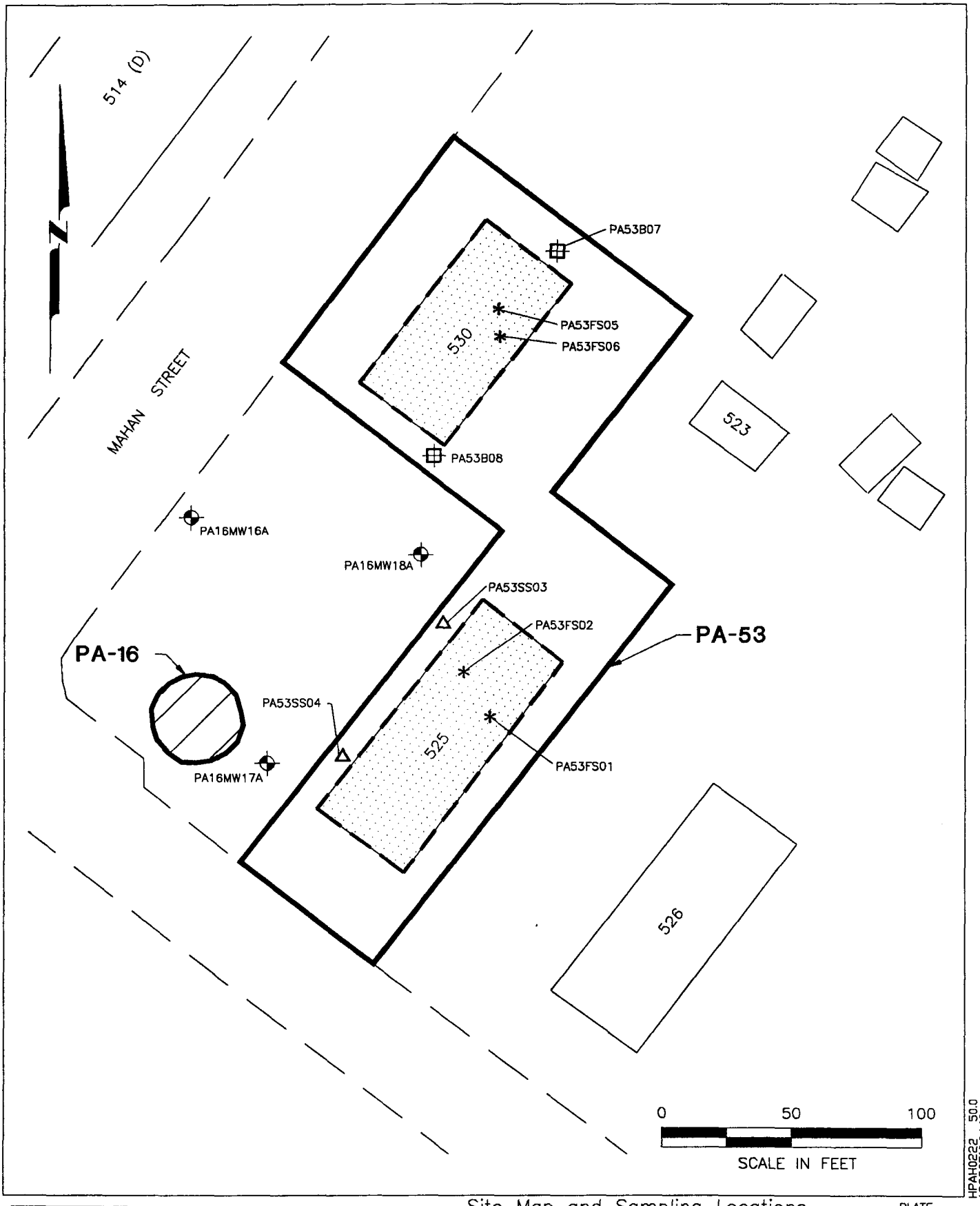
Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Chemical spill on floor	PA53FS05	1	1	1	1	1	1	
Chemical spill on floor	PA53FS06	1	1	1	1	1	1	
Soil beneath oil stain	PA53B07	3	3	3	3	3	3	
Soil beneath oil stain	PA53B08	3	3	3	3	3	3	
TOTAL ANALYSES		8	8	8	8	8	8	

Summary of Inorganic Analyses
in Groundwater Samples
Site PA-16
Hunters Point Annex

Test Method Analyte Name	(Number of Analyses)	Units[1]	Number of Detected Values	Min Value	Max Value	Maximum Contaminant Levels (MCLs)[2]
CLP-ICP	(5)	µg/l				
Aluminum		µg/l	2	123	322	1,000
Barium		µg/l	5	26.6	103	1,000
Calcium		µg/l	5	124,000	659,000	--
Cobalt		µg/l	1	6.1	6.0	--
Magnesium		µg/l	5	98,500	952,000	--
Manganese		µg/l	5	107	4,400	--
Molybdenum		µg/l	4	41.5	85.9	--
Nickel		µg/l	5	15.6	63	100
Potassium		µg/l	5	7,550	21,700	--
Silver		µg/l	1	9.2	9.2	50
Sodium		µg/l	5	404,000	1,650,000	--
EPA-9045	(5)					
pH		pH	5	7.4	7.8	--

1. Units expressed as micrograms (µg) of chemical per liter (l) of water.
2. California Primary MCLs except nickel, which is a proposed federal MCL.

Max Value = Maximum concentration detected in any groundwater sample analyzed for inorganics.
Min Value = Minimum concentration detected in any groundwater sample analyzed for inorganics; minimum concentration detected may be below the reporting limit.
-- = Not given for this metal



HPAH0222 50.0
19920710.0440

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-53
Hunters Point Annex
San Francisco, California

PLATE
PA-53

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

EXHIBIT 54

PA: 54

BUILDING/AREA: 511A

BUILDING/AREA NAME: Woodworking hobby shop

HISTORICAL USE: Woodworking hobby shop

CURRENT USE: Demolished

AREA/TYPE OF CONCERN: Potential soil contamination

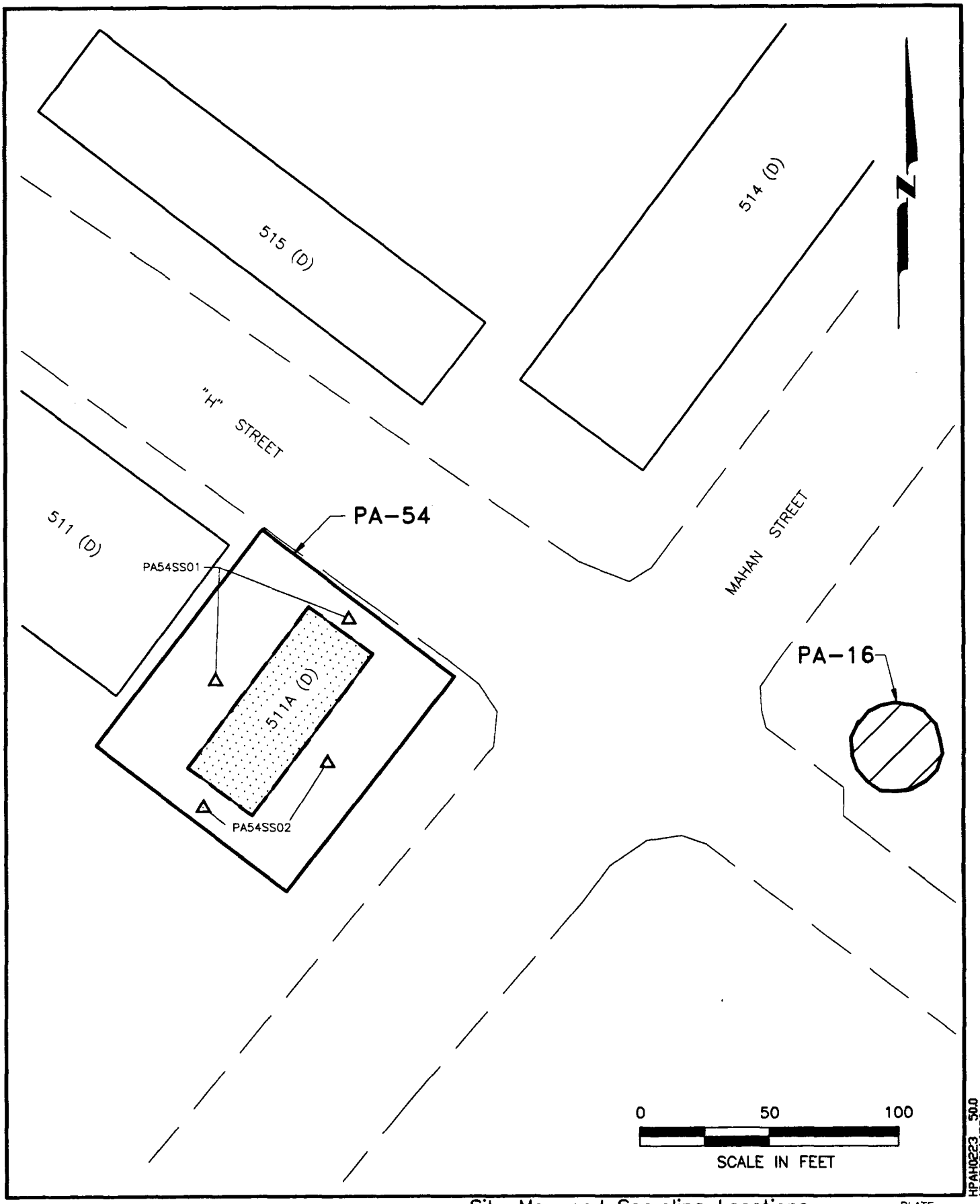
SUMMARY OF OBSERVATIONS:

Building 511A has been demolished; only the foundation remains. Miscellaneous debris has been dumped on the site.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Surface soil composite sample	PA54SS01	1	1	1	1	1	1	
Surface soil composite sample	PA54SS02	1	1	1	1	1	1	
TOTAL ANALYSES		2	2	2	2	2	2	



HPAH0223 50.0
19920314.1720

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-54
Hunters Point Annex
San Francisco, California

PLATE
PA-54

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

PA: 55

BUILDING/AREA: 307

BUILDING/AREA NAME: Electronic Assembly

HISTORICAL USE: Electronic Assembly, Machine Shop

CURRENT USE: Storage

AREA/TYPE OF CONCERN: Oil on floor and exterior pavement

SUMMARY OF OBSERVATIONS:

The building is used by Westinghouse for storage. Partially full drums on the north side of the building have leaked oil onto the asphalt. The concrete in the machine shop is soaked with oil. A Westinghouse employee indicated that the previous tenant, Triple A, filled underground vaults west of the building with hazardous materials and then paved them over.

PROPOSED WORK PLAN:

Task 1. Perform a geophysical investigation to locate reported subsurface vaults west of the building. If vaults are identified, recommend sampling and analyses using the Field Variance process.

Task 2. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil beneath machine shop floor	PA55B01	3	3	3	3	3	3	
Soil beneath drums	PA55SS02	1	1	1	1	1	1	
Composite of drums	PA55DM03	1	1	1	1	1	1	
TOTAL ANALYSES		5	5	5	5	5	5	

N

REGUNNING PIER

PA55SS02

PA55DM03

PA55B01

307

370

PA-55

PA-32

SUSPECTED
UNDERGROUND
VAULTS

0 50 100

SCALE IN FEET

HPAH0224 50.0
19920314.1744

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-55
Hunters Point Annex
San Francisco, California

PLATE
PA-55

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

PA: 56

BUILDING/AREA: Area VII, Railroad Tracks

BUILDING/AREA NAME: Area VII, Railroad Tracks

HISTORICAL USE: Lumber transport and storage

CURRENT USE: Railroad car museum and restoration; parts storage

AREA/TYPE OF CONCERN: None observed

SUMMARY OF OBSERVATIONS:

No evidence of hazardous materials releases was observed; however, in the past, the railroad yard was used for lumber loading/unloading, and wood preservatives such as PCP may have been used.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Soil Boring	PA56B01	2	2	2	2	2	2	PCP
Soil Boring	PA56B02	2	2	2	2	2	2	PCP
Soil Boring	PA56B03	2	2	2	2	2	2	PCP
Soil Boring	PA56B04	2	2	2	2	2	2	PCP
TOTAL ANALYSES		8	8	8	8	8	8	

CRISP AVE.

815

HPA FACILITY BOUNDARY

830

PA56B03

821

PA56B02

FACILITY BOUNDARY

PA-56

PA56B01

PA56B04

809

808

TANKS

811

IR-121

810

SCRAP YARD

807

319

812

309

IR-4

PA-36

SPEAR AVE.

702

400

IR-12

0 100 200

SCALE IN FEET

HPAH0225 100.0
1992/0316.1414

HARDING LAWSON ASSOCIATES
Engineering and
Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-56
Hunters Point Annex
San Francisco, California

PLATE
PA-56

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	10/91	3/92

EXHIBIT 57

PA: 57

BUILDING/AREA: Drydock 4 Area

BUILDING/AREA NAME: Not applicable

HISTORICAL USE: Ship repair

CURRENT USE: Not in use

AREA/TYPE OF CONCERN: Sandblast material

SUMMARY OF OBSERVATIONS:

The entire area is paved. There is evidence of dispersed sandblast material on the asphalt. Storm drains likely contain sandblast debris. An oil stain from a leaking transformer on the northeast side extends to a storm drain. ACM wrapping was observed on steam pipes associated with water tanks on each side of the drydock area. A large hopper containing black sandblast sand exists at the north corner of the site. On the west corner is an empty tent-like structure labelled "hazardous waste accumulation area." Minor oil and paint stains were observed on the pavement. There were no hazardous wastes stored in the tent-like structure.

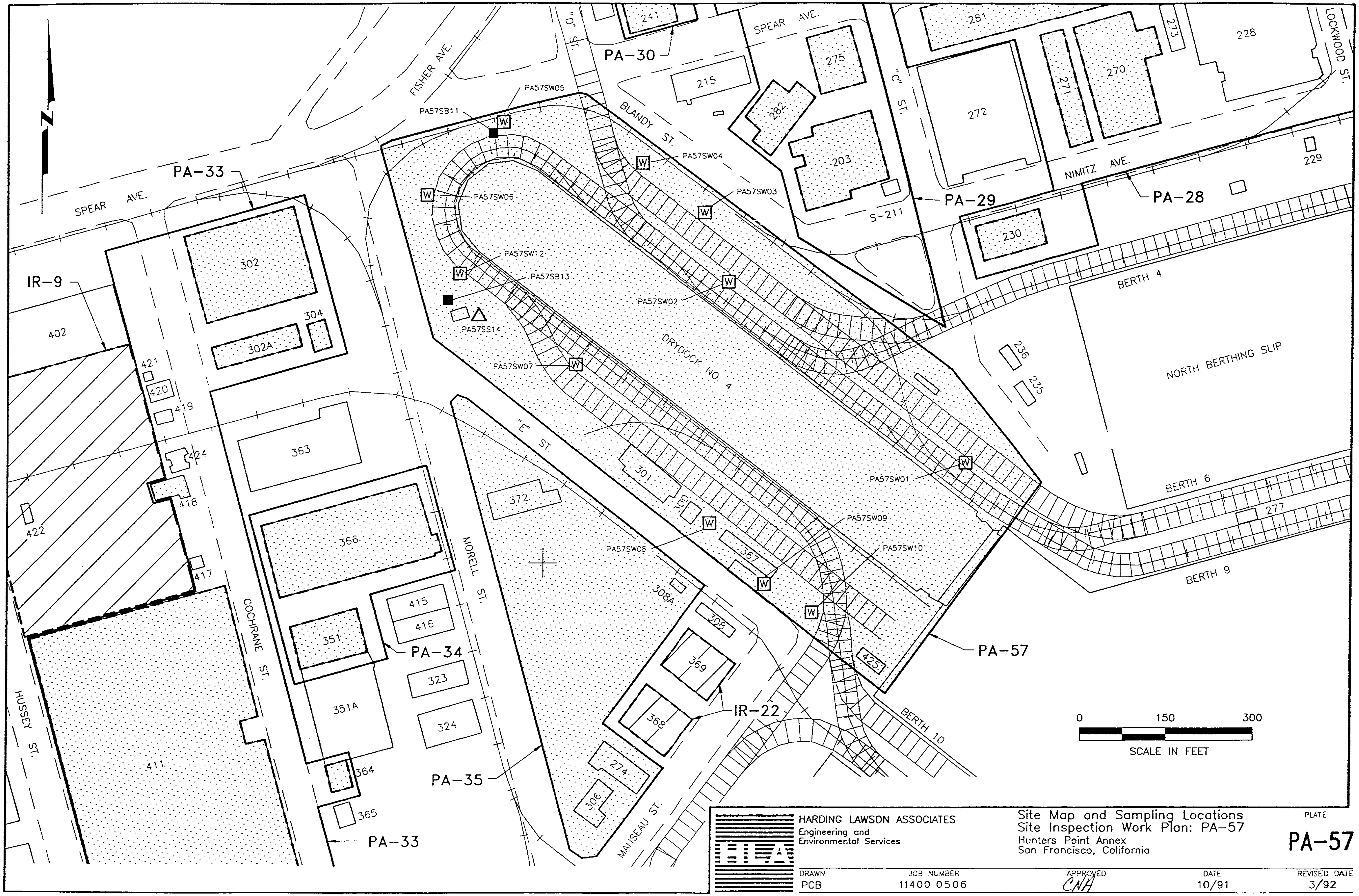
PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Storm drain	PA57SW01	1	1	1	1	1	1	CN
Storm drain	PA57SW02	1	1	1	1	1	1	CN
Storm drain near transformer	PA57SW03	1	1	1	1	1	1	CN
Storm drain near transformer	PA57SW04	1	1	1	1	1	1	CN
Storm drain near sand hopper	PA57SW05	1	1	1	1	1	1	CN
Storm drain	PA57SW06	1	1	1	1	1	1	CN
Storm drain	PA57SW07	1	1	1	1	1	1	CN

BUILDING/AREA: Drydock 4 Area (continued)

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Storm drain	PA57SW08	1	1	1	1	1	1	CN
Storm drain	PA57SW09	1	1	1	1	1	1	CN
Storm drain	PA57SW10	1	1	1	1	1	1	CN
Sandblast material in hopper	PA57SB11					1	1	CN
Storm drain	PA57SW12	1	1	1	1	1	1	CN
Sandblast debris near "hazardous waste accumulation area"	PA57SB13					1	1	CN
Oil and paint stains	PA57SS14	1	1	1	1	1	1	CN
TOTAL ANALYSES		12	12	12	12	14	14	


N
SPEAR AVE.
FISHER AVE.
"D" ST.
BLANDY ST.
"C" ST.
NIMITZ AVE.
LOCKWOOD ST.
"E" ST.
MORELL ST.
COCHRANE ST.
HUSSEY ST.
MANSEAU ST.
PA-33
PA-30
PA-29
PA-28
PA-34
PA-35
PA-57
IR-9
IR-22
241
215
275
282
203
S-211
281
272
271
270
273
228
229
230
302
302A
304
402
421
420
419
424
418
422
417
411
363
366
351
351A
364
365
415
416
323
324
372
301
300
367
308A
308
369
368
274
306
425
236
235
277
PA57SW05
PA57SB11
PA57SW04
PA57SW03
PA57SW06
PA57SW12
PA57SB13
PA57SW02
PA57SS14
PA57SW07
PA57SW01
PA57SW09
PA57SW10
PA57SW08
W
DRYDOCK NO. 4
BERTH 4
NORTH BERTHING SLIP
BERTH 6
BERTH 9
BERTH 10
0
150
300
SCALE IN FEET
HPAH0226 150.0
19920316.1436

HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

HLA

Site Map and Sampling Locations
Site Inspection Work Plan: PA-57
Hunters Point Annex
San Francisco, California

PLATE
PA-57

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNH	10/91	3/92

EXHIBIT 58

PA: 58

BUILDING/AREA: Scrap Yard Across from Building 258

BUILDING/AREA NAME: Not applicable

HISTORICAL USE: Unknown; medical dispensary once existed at Bldg. 210

CURRENT USE: Storage/disposal of miscellaneous items

AREA/TYPE OF CONCERN: Oil stains on soil and miscellaneous debris

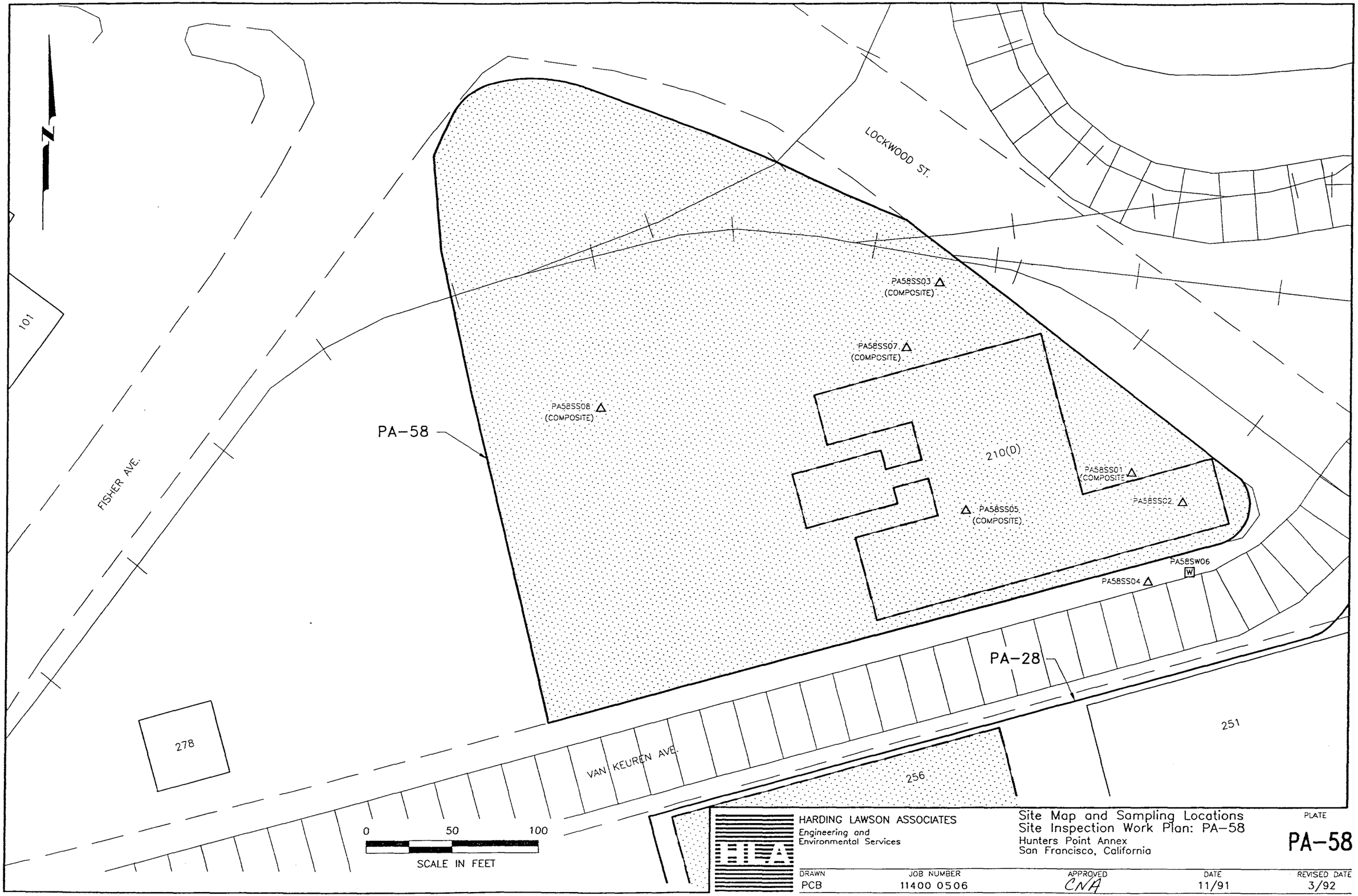
SUMMARY OF OBSERVATIONS:

Most of the site has an asphalt or concrete surface with a few utility vaults and storm drains. Some of the accumulated materials have been segregated by type - scrap metals (aluminum and copper), manufacturing equipment, abandoned automobiles, motors, scrap wood, office equipment, and fire extinguishers. In one area, it appears several drums of tar were emptied onto the soil. Several damaged insulators leaking oil were observed on the site. Other debris observed on the surface included plates from a damaged lead-acid battery, a leaking oil drum, and a large piece of equipment that is leaking oil.

PROPOSED WORK PLAN:

Task 1. Collect and analyze samples as follows:

Sampling Location	Sample Designation	TPH	TOG	PCB	VOC	SOC	MTL	OTHER
Discolored soil composite	PA58SS01	1	1	1	1	1	1	
Soil beneath leaking drum	PA58SS02	1	1	1	1	1	1	
Soil composite beneath leaking insulator	PA58SS03	1	1	1	1	1	1	
Soil beneath large equipment	PA58SS04	1	1	1	1	1	1	
Discolored soil composite	PA58SS05	1	1	1	1	1	1	
Storm drain	PA58SW06	1	1	1	1	1	1	
Trash/debris soil composite	PA58SS07	1	1	1	1	1	1	
Vehicles area soil composite	PA58SS08	1	1	1	1	1	1	
TOTAL ANALYSES		8	8	8	8	8	8	



HARDING LAWSON ASSOCIATES
Engineering and Environmental Services

Site Map and Sampling Locations
Site Inspection Work Plan: PA-58
Hunters Point Annex
San Francisco, California

PLATE
PA-58

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PCB	11400 0506	CNA	11/91	3/92

HPAH0227 50.0
19920316.1439

Appendix A

NAVY RESPONSE TO AGENCY COMMENTS ON PRELIMINARY ASSESSMENT, OTHER AREAS/UTILITIES NAVAL STATION, TREASURE ISLAND, HUNTERS POINT ANNEX

DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 727
SAN BRUNO, CALIFORNIA 94066-0720

5090
Ser 1811RC/00629
21 MAR 1991

IN REPLY REFER TO:

From: Commander, Western Division, Naval Facilities Engineering Command
To: Distribution

Subject: PRELIMINARY ASSESSMENT, OTHER AREAS / UTILITIES
NAVAL STATION TREASURE ISLAND, HUNTERS POINT ANNEX

Encl: (1) Navy Response to Comments Regarding the Preliminary Assessment, Other Areas / Utilities

1. In response to regulatory agency comments on the Preliminary Assessment, Other Areas / Utilities, enclosure (1) is forwarded.

2. Should you have any questions regarding this matter, the point of contact is Commander, Western Division, Naval Facilities Engineering Command (Attn: Raymond K. Chiang, Code 1811RC, (415) 244-2554.)

3. By copy of this letter, the document is also being provided to other concerned regulatory agencies.

Michael A. Miguel

MICHAEL A. MIGUEL
By direction

Distribution:
U.S. Environmental Protection Agency (Attn: Chuck Flippo)
California Department of Health Services (Attn: Mark Malinowski)

Copy to:
Regional Water Quality Control Board (Attn: Steve Ritchie)
Bay Area Air Quality Management District (Attn: Scott Lutz)
California Dept. of Fish & Game (Attn: Mike Rugg)
U.S. Fish & Wildlife Service (Attn: Steve Schwarzback)
National Oceanic & Atomospheric Administration (Attn: Chip Demarest)
Hunters Point Technical Review Committee Public Member (Attn: Rev. Arelious Walker)
City and County of San Francisco (Attn: David Wells)
San Francisco District Attorney (Attn: Steve Castleman)
Bay Conservation and Development Commission (Attn.: Robert Merrill)

NAVY RESPONSE TO DHS COMMENTS
PRELIMINARY ASSESSMENT OTHER AREAS/UTILITIES
HUNTERS POINT ANNEX

This attachment presents the Navy's response to the January 17, 1991 Department of Health Services (DHS) comments regarding the draft report *Preliminary Assessment for the Other Areas/Utilities, Naval Station, Treasure Island Hunters Point Annex, San Francisco, California*, dated October 19, 1990.

General Comment 1: As indicated in earlier comments, it is unclear on how the objectives and technical approach will be integrated to deal with the alleged illegal dumping by Triple A Machine Shop.

Response: Sites where Triple A allegedly disposed of waste were addressed by the San Francisco District Attorney's Office. All but 7 of the sites are located within the original 11 installation restoration (IR) sites (IR-1 through IR-11) currently underway by the Navy. These sites will be addressed as part of the remedial investigations (RIs) described in the sampling plans for the Group I, II, III, and IV sites (HLA 1988 a,b,c,d). The remaining 7 sites (IR-12, IR-13, IR-14, IR-15, PA-16, IR-17, and PA-18) are either currently being investigated or planned for investigation in the near future (HLA 1990 g,b).

General Comment 2: This PA is deficient in site activity/use detail. The Department cannot concur with several recommendations identifying "No Further Action." A list of buildings requiring more documentation is attached. If further information/documentation is not available, the Department recommends a Site Inspection (SI) for the building.

Response: On behalf of the Navy, Harding Lawson Associates (HLA) and PRC Environmental Management, Inc. (PRC) conducted a site visit on February 25 and 26, 1991 to inspect the buildings requested by the DHS. The observations at each building or area are summarized in Table 1. Table 2 presents a summary of the DHS recommended action at each building or area with the Navy recommended action, based on the results of the site visit. Tables 3 and 13 from the draft Preliminary Assessment (PA) report have been updated to include this information and are included with this attachment as Tables 3 and 4. Where a building or area is recommended for additional action it has been included in either an existing or new SI site. Table 5 summarizes the buildings or areas identified in each SI site. Plate 1 shows the site locations. Upon regulatory agency concurrence with the recommended

SI activities and site groupings, an SI work plan will be prepared to describe the SI that will be conducted at each site.

General Comment 3: It is unclear why sites recommended for an SI were prioritized. Does the prioritization correlate to a level of effort (i.e. site walk over vs. soil borings) to be identified in the SI workplan?

Response: **The sites were prioritized to show their relative potential impact to the environment. The level of SI work at high priority sites will generally be higher than the low priority sites.**

General Comment 4: The Department and the EPA would like to meet with the Navy to further discuss the approach being applied to the PA and SI.

Response: **The Navy met with the agencies on December 14, 1990 to discuss the approach being applied to the PA and SI for the other areas/utilities. Another meeting can be arranged at the request of the agencies.**

REFERENCES

HLA 1988a. Work Plan Volume 2B. Sampling Plan for Group II Sites. Remedial Investigation Feasibility Study. Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California. November 15.

HLA 1988b. Work Plan Volume 2A. Sampling Plan for Group I Sites. Remedial Investigation Feasibility Study. Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California. December 5.

HLA 1988c. Work Plan Volume 2C. Sampling Plan for Group III Sites. Remedial Investigation Feasibility Study. Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California. December 6.

HLA 1988d. Work Plan Volume 2D. Sampling Plan for Group IV Sites. Remedial Investigation Feasibility Study. Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California. December 22.

HLA, 1990a. Site Inspection Work Plan, Sites PA-16 and PA-18. Naval Station Treasure Island, Hunters Point Annex, San Francisco, California. March 14.

HLA, 1990b. Work Plan Volume 2F, Sampling Plan for Group V Sites. Remedial Investigation Feasibility Study. Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California. December

NAVY RESPONSE TO EPA COMMENTS
PRELIMINARY ASSESSMENT OTHER AREAS/UTILITIES
HUNTERS POINT ANNEX

This attachment presents the Navy's response to the January 14, 1991 U.S. Environmental Protection Agency (EPA) comments regarding the draft report *Preliminary Assessment for the Other Areas/Utilities, Naval Station, Treasure Island Hunters Point Annex, San Francisco, California*, dated October 19, 1990.

Comments 1 through 8 refer to locations where staining was noted on aerial photos. Harding Lawson Associates (HLA) conducted a site visit to inspect these sites on March 18, 1991. Table 1 summarizes the observations made and the recommended SI action for each site is included in Table 6. This information is also included on Tables 3 and 4. Table 5 summarizes which SI site the locations recommended for additional action are included in. The site locations are shown on Plate 1. As stated in the response to the Department of Health Services (DHS) comments, an SI work plan will be prepared for the recommended SI sites upon agency concurrence with the recommended SI activities and site groupings. The Navy would like to obtain copies of the aerial photos reviewed from EPA.

Comment 9: A former Harding Lawson employee has advised us that the Building 503 PCB spill may have been the result of a broken underground pipe which had been carrying contaminated oil, rather than leakage from transformers at Building 503. This person believes the pipe was abandoned in place without decontamination. The PA mentions this pipeline on page 41 and Plate 13, but does not implicate it in the PCB spill, and suggests a different route for the pipeline, but with similar end points.

It was reported to us that the pipeline started at the northwest corner of Berth 15 and ran along Manseau Street to Hussey Street, then 350 feet along the west side of Hussey (to the vicinity of the spill), then south to H Street, and finally southwest along H Street to the vicinity of the Power Plant (exact end point is unknown). There may be another PCB spill associated with the north end of the pipe. (This is a possible route for a pipe as there is aerial photo evidence that underground construction did occur along this route.)

The area around Berth 15 has been paved since 1956. There is a discoloration visible in a 1965 photo and later photos between 120 and 320 feet SW of Berth 15. The discoloration is visible because of a sharp change in color aligned with the end of Berth 14, but the color difference may be an artifact of different paving materials.

Response: Based on information summarized in the sampling plan for the Group II sites (HLA, 1988 a) the suspected source of PCBs identified at Site IR-8 is a transformer pad and transformers on two power poles. The location of the reported line break, shown on Plate 13 of the draft PA report for the other areas/utilities, is

near Site IR-8. The potential for contamination from the pipline break will be addressed as part of the investigation of the steam lines. The location of the steam line shown on Plate 13 is based on utility drawings from the Navy. The potential for another spill at the north end of the pipe has not been reported to HLA or the Navy, but will be addressed when the site inspection work plan is prepared for the other areas/utilities.

Based on observations made during HLA's March 18, 1991 site visit, the color difference noted in the aerial photos may be due to different paving materials. No current staining was observed.

Comment 10: We have also been informed that Building 906 was used for storing and mixing of pesticides, and that pesticides were "dumped" on the slope between Buildings 906 and 102. A 1965 aerial photo shows a path leading past a barren patch of soil behind Building 102 which could be the result of an herbicide release. A 1990 photo shows an area of soil in the same region with different color and scarce vegetation. The PA suggests pesticide spills near Building 906, but Table 13 of the PA recommends Building 102 for only an asbestos program.

Response: The barren patch observed in the aerial photos was not observed on March 18, 1991. The Navy will obtain a copy of the aerial photos reviewed by EPA prior to the preparation of the SI Work plan and soil samples will be planned in the barren patch noted on the aerial photos. This sampling will be conducted as part of the SI for Building 906.

Comment 11: The catch basin in Building 411 is surrounded by very large presses, rollers, and transformers, many of which have leaked oily material, possibly including PCBs, onto the floor and into the catch basin. Thus, PCBs may also be in the soils around these drains.

Response: The potential for contamination by PCBs and other chemicals will be addressed by the collection and laboratory analysis of soil samples near the sump at Building 411. The recommended SI actions at this site are summarized in Table 4.

Comment 12: The Navy facility drawings which Emcon used as the base map for various maps in its *"Verification Step Plan of Action"* show several transformer slabs which are not mentioned in any of the materials we have reviewed. It is possible that at least some of these transformers leaked PCBs, contaminating local soil and the contamination was not recognized at the time the transformers were removed.

Response: Navy information regarding the location of previous transformer sites was included in Appendix E to the draft PA report for the other area/utilities. This information will be reviewed and summarized as part of the SI activities recommended for Site PA-51, the previous transformer sites. This site is identified in Table 5.

Comment 13: The inner chamber of the plate furnace south of Building 408 is composed of fire bricks. Such bricks often contain leachable chromium. Both environmental releases and disposal of bricks should be addressed.

Response: The plate furnace and the bricks which comprise the inner chamber will be addressed as part of the SI planned at Building 408. The potential presence of leachable chromium will be addressed by the analytical program recommended for this site.

Comment 14: Asbestos in enclosed or underground areas such as the steam/fuel pipe galleries is not addressed in current work plans. Tank removal contractors have noted asbestos lagging at the point where they cut pipes emerging from the galleries.

Differential settling in Building 411 has been observed to be causing various pipes to heave out of the brick flooring. Similar differential settling could rupture the pipe galleries and expose asbestos in the future.

We recognize that the Navy has explained in the PA that asbestos is being handled through an ACM removal program separate from the IRP (e.g., Section 1.2, page 2). Since asbestos releases are a matter appropriately addressed under CERCLA, however, EPA remains concerned with how the Navy's ACM program fits into the overall CERCLA program at Hunters Point. While we have seen some documents relating to ACM removal at IR sites subject to removal actions, we are not clear how the ACM program will account for asbestos problems which are not identified in the course of removal or remedial actions at IR sites. Clarification of the scope of the ACM program is needed.

Response: **The draft PA report for the other areas addressed areas where the presence of asbestos may present an environmental threat in its existing condition. The asbestos present in enclosed areas or in lagging on underground utilities should not pose an environmental threat if left undisturbed. The presence of asbestos should be addressed if the asbestos is to be disturbed.**

Building 411 will be inspected as part of the preparation of the SI work plan for the building. The location of differential settling and ruptured pipes will be noted during the inspection. Sampling activities will be recommended in areas where potential breakage is noted.

Lotus/dv116424

TABLE 1. SUMMARY OF RESULTS OF SITE INSPECTIONS, HUNTERS POINT ANNEX (1)

BLDG	SITE	DESCRIPTION	OBSERVATIONS
113A		Q&RA NDT Facility	Active oil and concrete testing lab. Several drums of kerosene, properly sealed, behind building. No apparent leakage.
122		Substation "V"	Active, no access. Transformers contain non-PCB oil (YEI, 1989).
131		Substation "U"	No building at indicated location, asphalt covered area adjacent to pier. No apparent staining.
134	PA-25	Machine Shop	Oil stains on concrete floor, sawdust and absorbent materials on stains. Approximately 25 drums in good condition containing triflouromethane and trichloromonofluoroethane. Partially belowground degreasing vat in concrete floored area.
135		Substation "G"	No access to building interior. Transformers contained PCB (YEI, 1989)
141		Shipwright Shop	Woodworking machinery and other associated equipment. No apparent chemical storage or leakage.
142		Storage (Air Raid)	No building, only footings remain at indicated site. No apparent chemical storage or leakage.
157	PA-26	Q&RA NDT Facility	Empty building. Stained area on dirt portion of floor in west end of building.
160		Sewage Pump Station "D"	Unable to locate building.
161		Maint. Service Center	No building at indicated location, unpaved vacant lot. No apparent staining. Building title suspect.
162		Paint Storage	No building at indicated location, unpaved area adjacent to boat ramp. No apparent staining. Building title suspect.
163		Rubber Shop Annex	Small storage building contains mooring lines, etc., concrete and asphalt floor. Used pipes with asbestos lagging stacked inside building. No other apparent chemical staining or leakage.
206		Substation "A"	Active, no access. Transformers contain PCB oil (YEI, 1989).
208		Shop Service	Exterior signs indicate "Tool Room" and "Canteen". Concrete floored building contains lockers and picnic tables. Exterior ground surface covered by asphalt. No apparent chemical storage or leakage.
214		Combat Weapons Systems Office	Variably colored asphalt patches on pavement. No evidence of stains as described by EPA from aerial photo evaluation.
217	PA-29	Sheetmetal Shop	Storage of office furniture, lockers, etc. Small, narrow dry sump inside building near north end. Small quantity of dust and debris in sump.
224		Storage (Air Raid)	Empty concrete building with concrete floor, asphalt covering exterior ground surface. No chemical storage or leakage.
225		Work Control Center	Mostly empty building. Posted signs inside indicate work with ropes and cables. Probably used as offices. No apparent chemical storage or leakage.

(1) Inspection Dates were: February 25-26, 1991 and March 18, 1991

Lotus/dvl16424

TABLE 1. SUMMARY OF RESULTS OF SITE INSPECTIONS, HUNTERS POINT ANNEX (1)

BLDG	SITE	DESCRIPTION	OBSERVATIONS
229		Substation "L"	Building interior not accessible. No apparent leakage. Transformers contained non-PCB oil. (YEI, 1989)
230	PA-28	Shop Service	East end of building is plastics fabrication facility used to store chemical drums labeled "polyurethane". No apparent leakage or spillage. West end of building is auto repair shop. Oil stains on pavement and dirt area at west end. Stain indicate drainage of oil toward storm drain.
231	PA-28	Machine Shop	No evidence of stains as described by EPA from aerial photo evaluation. Large lathes, drill presses, etc., kiln. Metal shavings and oil stains on floor. Concrete debris lightly covered with sand. Several large oil sumps contain liquid.
235		Storage	No building at indicated location. Asphalt covered area. No apparent staining.
252		Bus Terminal	Variably colored asphalt patches on paved areas. No evidence of stains as described by EPA from aerial photo evaluation.
258	PA-58	Scrapyard	Area covered by scrap metal and debris. Could not observe for staining reported by EPA from aerial photo evaluation.
270	PA-28	Paint Shop	Asphalt stains near northeast corner of building.
271	PA-28	Paint Shop Annex	No evidence of stain as described by EPA from aerial photo evaluation.
272		Shop Service	Wire rope/cable wholesaler and tarp manufacturer. Some Navy equipment in storage. No apparent chemical storage or leakage.
273		Substation "GH-2"	Active. Open air substation with concrete floor and cinder block walls, no ceiling. No apparent leakage. Oil switches contain non-PCB oil (YEI, 1989).
274	PA-35	Decontamination Training	Currently used as artist's studio. No apparent chemical storage or leakage in building interior. Underground vault outside building contains unknown liquid.
278		Storage	No building at indicated location. Asphalt paved area. No apparent staining.
279	PA-29	Storage	Empty building except for debris. Storm drain in floor. Two open 20-gallon drums containing oily liquid located between buildings 279 and 280. No apparent spillage or leakage.
280	PA-29	Aluminum Cleaning Area	Empty building, some stained areas and cracked pavement. Signs indicating "Rinse Tanks" at north end of building.
281	PA-28	Machine Shop	Storage of large wood crates containing ship parts. No evidence of "sump". Non-spark wood flooring over concrete sub-floor buckled in several areas, apparently where lifting gantry had dripped oil.
302	PA-33	Transportation Shop	Oily concrete floor, staining, batteries, hydraulic lifts with below-ground sumps.
302A	PA-33	Transp. Shop Annex	One below-ground vault. Oil stained concrete floor.
304	PA-33	Service Station	Underground tank(s) and product lines probably still in-place.

(1) Inspection Dates were: February 25-26, 1991 and March 18, 1991

Lotus/dv116424 (1)

TABLE 1. SUMMARY OF RESULTS OF SITE INSPECTIONS, HUNTERS POINT ANNEX

BLDG	SITE	DESCRIPTION	OBSERVATIONS
307	PA-55	Electronic Assembly	Oily cracked, concrete floors, machinery leaking oil. Drums stored outside with oil, drip pan to contain leaks.
309		Sandblast Annex	No building at indicated location, some footings remain. Unpaved area. No apparent staining.
319		Sandblast Annex	No building at indicated location. Unpaved vacant lot. No apparent staining.
351A		Electronics Shop Annex	Asbestos lagging on pipes. Four cardboard drums containing barium sulfate. Drums are in good condition. No evidence of spillage or leakage.
364	PA-33	Radiol Research/Storage	Vault behind building containing unknown liquid.
366	PA-34	Boat & Plastics Shop	Oily concrete floor. Approximately 20 drums stored outside with debris and shavings. 9 drums containing oil and viscous liquid. Some drums leaking and damaged. Oil stained soil observed.
371	PA-36	Equipment Storage	No evidence of stain described by EPA from aerial photo evaluation.
404A	PA-36	Storage	Covered open storage area with soil floor. Stored electrical machinery.
415		Storehouse	Empty building. No apparent chemical storage or leakage.
416		Storehouse	Empty building. No apparent chemical storage or leakage.
423		Paint Storage/Cmprsr Hut	Vacant building with concrete floor. No apparent chemical storage or leakage.
436	PA-37	Material Storage	More than 100 1 to 5 gallon cans containing paints and solvents stored inside. Some open. Deteriorated concrete floor.
438	PA-44	Metal Spray Shelter	Sand covering floor of building.
506	PA-38	Radiological Research	No building at indicated location. Vacant lot. Oil staining and debris on ground. Building title suspect.
507	PA-38	Radiological Research	No building at indicated location. Vacant lot. No apparent staining. Building title suspect.
509		Radiol Research Library	No building at indicated location. Vacant lot. No apparent staining.
510	PA-38	Radiological Research	No building at indicated location. Unpaved vacant lot. No apparent staining. Building title suspect.
511A	PA-54	Woodwork Hobby Shop	No building at indicated location. Some footings and foundation remain. Remaining floor is incomplete. No apparent staining.
517		Marine Storage	No building at indicated location. Floor and foundation remain. No apparent staining.
525	PA-53	Storehouse	Large mooring winches outside building with evidence of oil leaks, discolored soil.
528		Substation	Transformers. Building on pier over water. No apparent leakage.

(1) Inspection Dates were: February 25-26, 1991 and March 18, 1991

Lotus/dv116424

TABLE 1. SUMMARY OF RESULTS OF SITE INSPECTIONS, HUNTERS POINT ANNEX (1)

BLDG	SITE	DESCRIPTION	OBSERVATIONS
530	PA-53	Public Works(Auto Hobby)	Signs indicate "Camping Room Issue". Soil staining outside, adjacent to side of building. No evidence of stains as described by EPA from aerial photo evaluation.
807		Scrap Yard Shed	Burned building. Empty cardboard drums inside. No apparent leakage or staining on soil adjacent to building.
808		Storehouse	Office furniture storage/Precision Trucking Company freight storage. No No apparent chemical storage or leakage.
809		Storehouse/RR Engine Hou	Railroad museum/restoration facility, restoring old steam locomotive and pasenger cars. Adequate housekeeping by current tenants. Current tenants indicate that site was formerly a storage yard, possibly used by Triple A.Shipping.
812		Sandblast Shed	No building at indicated location. Unpaved vacant lot. No apparent staining.
818	PA-41	Chlorination Plant	No building at indicated location, only footings remain. Asphalt paved area inside of footings. Garbage piled in paved area. Possible stained area north of pavement.
819		Sewage Pump Station "A"	Active. No chemical storage, leakage, or odors.
821		X-ray Shield Facility	Could not access inside of building. No apparent staining outside.
906	PA-43	Gardners Tool Shed	Signs on wall indicating use of insecticides and other chemicals. Insecticides likely on wood and dirt-floored areas. Asbestos wallboard used in one portion of building.
	PA-56	AREA VII	Evidence of former railroad round table. No apparent staining.
	PA-32	AREA XI-Regunning Pier	Utility vault with liquid in bottom. Variably colored pavement. No apparent staining.
	PA-35	Area Bounded by Manseau, Morell and "E" Streets	Stained soil and unidentified material storage.
DD4	PA-57	Drydock 4 Area	Large oil stains on pavement on east side of drydock. "Hazardous Waste "Accumulation Area" indicated.
	PA-29	Area bounded by Nimitz, Blandy and "C" Streets	Some staining on asphalt pavement. Two utility vaults, one with oily floor and walls. No evidence of circular structure described by EPA.

(1) Inspection Dates were: February 25-26, 1991 and March 18, 1991

LOTUS/DVL18423

TABLE 2. SUMMARY OF RECOMMENDED ACTIONS FOR ADDITIONAL SITES, HUNTERS POINT ANNEX

BLDG	SITE	DESCRIPTION	DHS COMMENT	DHS RECOMMENDED SI ACTION	ADDITIONAL* NAVY RECOMMENDED SI ACTION
113A		Q&RA NDT Facility	Type of Activity?		No action
122		Substation "V"	Transformers only?		No action
131	PA-51	Substation "U"	Transformers only?		Include with previous transformer sites
134	PA-25	Machine Shop	Type of Activity?	Soil samples near degreasing vat	Soil samples near degreasing vat
135		Substation "G"	Transformers only?		Gain access and inspect
141		Shipwright Shop	Type of Activity?		No action
142		Storage (Air Raid)	Storage of What?		Review records to evaluate type of of materials previously stored
157	PA-26	Q&RA NDT Facility	Type of Activity?	Soil samples	Near surface soil samples from stained area.
160		Sewage Pump Station "D"	Contaminants in sewer?	Identify in sewer study	Potential contaminants will be addressed in sewer study
161	PA-23	Maint. Service Center	Type of Activity?	Soil samples	Near surface soil samples
162	PA-23	Paint Storage	Type of Activity?	Soil samples	Near surface soil samples
163		Rubber Shop Annex	Type of Activity?	Soil samples	Asbestos program
206		Substation "A"	Transformers only?		Gain access and inspect
208		Shop Service	Type of Activity?	Soil samples	No action
217	PA-29	Sheetmetal Shop	Type of Activity?	Soil samples near sump area	Soil samples near sump
224		Storage (Air Raid)	Storage of What?		Review records to evaluate type of materials previously stored.
225		Work Control Center	Type of Activity?	Soil samples	No action
229		Substation "L"	Transformers only?		No action
230	PA-28	Shop Service	Type of Activity?	Soil samples	Sample runoff, sample stained area
231	PA-28	Machine Shop	Type of Activity?	Soil samples near sump area	Soil samples near sump
235		Storage	Storage of What?		Review records to evaluate type of material previously stored.
272		Shop Service	Type of Activity?	Soil samples	No action
273		Substation "GH-2"	Transformers only?		No action
274	PA-35	Decontamination Training	Type of Activity?	Soil samples	Sample vault contents, soil samples near vault
278		Storage	Storage of What?		Review records to evaluate type of materials previously stored.
279	PA-29	Storage	Storage of What?		Remove drums. Review records to evaluate type of materials previously stored
280	PA-29	Aluminum Cleaning Area	Type of Activity?	Soil samples	Soil samples beneath cracked areas of pavement
281	PA-28	Machine Shop	Type of Activity?	Soil samples near sump area	Soil samples from buckled areas of floor**

* This table includes recommended actions to address the DHS comment.

See Table 4 for a complete list of recommended SI actions for each building or area.

**Sump not observed at time of inspection.

LOTUS/DVL16423

TABLE 2. SUMMARY OF RECOMMENDED ACTIONS FOR ADDITIONAL SITES, HUNTERS POINT ANNEX

BLDG	SITE	DESCRIPTION	DHS COMMENT	DHS RECOMMENDED SI ACTION	ADDITIONAL* NAVY RECOMMENDED SI ACTION
302	PA-33	Transportation Shop	Type of Activity?	Soil samples near sump area	Soil samples near sump
302A	PA-33	Transp. Shop Annex	Type of Activity?	Soil samples near sump area	Soil samples near sump
304	PA-33	Service Station	Type of Activity?	Soil samples near sump area	Soil samples near sumps*** underground storage tank program
307	PA-55	Electronic Assembly	Type of Activity?	Soil samples	Sample oil on floor, sample soil beneath cracks in floor
309		Sandblast Annex	Type of Activity?	Soil samples	Review records to evaluate past activities
319		Sandblast Annex	Type of Activity?	Soil samples	Review records to evaluate past activities
351A		Electronics Shop Annex	Type of Activity?	Soil samples	Asbestos program
364	PA-33	Radiol Research/Storage		Soil samples near sump area	Soil samples near vault
366	PA-34	Boat & Plastics Shop	Type of Activity?	Soil samples	Remove drums. Sample concrete and soil in storage and leak areas
404A	PA-36	Storage	Type of Activity?	Storage	Soil samples
415		Storehouse	Storage of What?		Review records to evaluate previous storage
416		Storehouse	Storage of What?		Review records to evaluate previous storage
423		Paint Storage/Cmprsr Hut	Type of Activity?	Soil samples	No action
436	PA-37	Material Storage	Storage of What?		Sample concrete and soil inside building, remove solvent and paint containers
438	PA-44	Metal Spray Shelter	Type of Activity?	Stay out of flying metal pieces?	Remove sand and inspect floor
506	PA-38	Radiological Research	Type of Activity?	Soil samples	Sample stained areas
507	PA-38	Radiological Research	Type of Activity?	Soil samples	Soil samples
509		Radiol Research Library	Type of Activity?	Soil samples	No action
510	PA-38	Radiological Research	Type of Activity?	Soil samples	Soil samples
511A	PA-54	Woodwork Hobby Shop	Type of Activity?	Soil samples	Soil samples
517		Marine Storage	Storage of What?		No action
525	PA-53	Storehouse	Storage of What?		Sample stained area
528		Substation	Transformers only?		No action
530	PA-53	Public Works(Auto Hobby)	Type of Activity?	Soil samples	Sample stained soil
807		Scrap Yard Shed	Type of Activity?	Cover what type of equipment?	Covered under IR-4
808		Storehouse	Storage of What?		No action
809		Storehouse/RR Engine House	Storage of What? Former railroad diesel engine repair?	Soil samples	Review records to evaluate type of materials previously stored
812		Sandblast Shed	Type of Activity?	Soil samples	Review records to evaluate past activities
318	PA-41	Chlorination Plant	Type of Activity?		Sample stained area

***The sump was observed by ERM West in the fence-to-fence survey.

LOTUS/DVL16423

TABLE 2. SUMMARY OF RECOMMENDED ACTIONS FOR ADDITIONAL SITES, HUNTERS POINT ANNEX

BLDG	SITE	DESCRIPTION	DHS COMMENT	DHS RECOMMENDED SI ACTION	ADDITIONAL* NAVY RECOMMENDED SI ACTION
819		Sewage Pump Station "A"	Contaminants in sewer?	Identify in sewer study	Will be addressed in sewer study
821		X-ray Shield Facility	Type of Activity?		Inspect inside of building
906	PA-43	Gardners Tool Shed	Type of Activity?	Soil samples	Asbestos program, sample soil in shed
	PA-56	AREA VII	Railroad area	Soil samples	Soil samples
	PA-32	AREA XI – Regunning Pier	Too few samples	Soil samples	Sample vault contents. No previous soil samples collected
	PA-35	Area Bounded by Manseau, Morell and "E" Streets	Open area near drydock Type of Activity?	Soil samples north of area already sampled.	Sample stained areas, sample stored material
DD4	PA-57	Drydock 4 Area	Type of Activity?	Soil samples	Sample soil beneath pavement in stained area

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
101	Admin Office/ Reprod Dept		Hydrogen Peroxide, Ammonia Photodeveloper solutions,			1				
		J. Terzian/The Point	Paint thinner Paints, solvents	3 (55-gal) waste thinner				Yes		Drums located outside of Building 101
102	Employment Office							Yes		
109	Police Station	Harbor Leasing and Sales	oil (PCBs)	≥ 100-gal oil/water mixture reservoir		3			Yes	Staining associated. Reservoir abandoned outside.
110	Marine Barracks	J. Terzian/ the Point						Yes		
113	Tug Maintenance; Salvage Divers; Substation "S"		Oils (PCBs), sulfur hexafluoride	5 (55-gal) oil drums both open and closed; ≥ 175 gallons		1	Yes	Yes		Oil stains on pavement from leaking hydroequipment
113a	Q&RA Non-Destructive Test Facility		Kerosene[6]							Building title suspect
114	Office Building	Smith/Emery	Corrosives, hydrocarbons, PCB oil, kerosene, X-Ray deveoping chemicals,	3 (55-gal) kerosene reservoirs				Yes		Acid reservoirs inside next to drain, in use.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
115	COMSUBGRUSFRAN Office & Training Bldg.	Finish Work Reardon Jewelry Sonic Incision MicroKinetics	Acetylene			3		Yes		Tenants occupying building have small inventory of chemicals.
116	COMSUB Training Building	Frameworks Mokko Shop Moosewood Furniture	Dry joint compound	2 25-lb. bags				Yes		
117	COMSUB Barracks	J. Terzian/The Point						Yes		
120	Enlisted Men's Club	SF Police Athletic Club	Bicarbonate, paint, acetylene	55-Gal drums (detergent, Naptha)						
122	Substation "V" and Compressor Plant, S-03					8				Building title suspect
124	Acid Mixing Plant		Sulfuric Acid Electrolyte		5					No documentation of tank removal Building removed
125	Submarine Cafeteria	Kimberly Vinegar T. Bridenthal				2		Yes Yes		Friable Asbestos Friable Asbestos
128	Shop Service and Work Control Center No. 1	Miller Pipeline Company	Oil, Solvents, Corrosives, Hydrocarbons	2 (55-gal) oil 2 (55-gal) waste oil 2 (55-gal) residue						Contaminated runoff reported

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
130	Shop Service	Engel Engineering	Waste Oil, Hydrocarbons, Paints, Solvents	7 (55-gal) oil Some open				Yes Yes		Friable asbestos Large quantities
		Protective Finishes	Paints, solvents, TCE, MEK, toluene	4 (55-gal) TCE, MEK, toluene				Yes		In storage. Large quantities chemicals
131	Substation "U", S-03					2				Building title suspect Building demolished
134	Machine Shop & Q&RA		Tertbuytl phenyl phosphate Trifluoromethane and trichloromonofluorethane[6]	Degreasing vat			Yes[6]	Yes	Yes[6]	Old solvent vats and transformers. Unidentified chemicals, possible PCBs Oil stains on floor
	Offices, S-06, 38	Oda Refrigeration	Penesolve 814, Penestrip CR, Emulsifying Agents Oil (PCBs), solvent, hydraulic fluid	55-gal (unknown)						
		Touring Gear	Freon, Solvent, oil	23 (55-gal) (unknown) 1 (55-gal) oil tank (oil)				Yes		Large quantities in storage. Friable asbestos. Tenant unavailable for inspection.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Trans-formers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
135	Substation "G", S-03					1				Building title suspect
140	Pump House - Drydock No. 3					3				Building title suspect
146	TACAN Facility, S-67		Chlorinated Solvents, Oil containing PCB, Assorted paints, Resins	1 (55-gal) oil (closed) 4 part-full 55-gal oil; 1 (15-gal oil)open several 55-gal (unknown)		3				Unknown contents of many containers. HLA observed oil staining on pavement
156	Rubber Shop, S-56	Morgan Chemical	Paints, Solvents, Hydrocarbons	5 (55-gal) lube oil 5 (55-gal) thinner 6 (55-gal)l methanol			Yes	Yes	Yes	Morgan is hazardous waste handler; survey illegible in parts; some staining.
157	Q&RA Ind. Lab Non-Destructive Test/ Metal Fabrication Ranch		Oils, chlorinated solvents, undetermined liquids, orthophosphoric acid	open (500-gal) tank					Yes[6]	Active drain contents of open tank unknown. Stained area on dirt portion of floor.
160	Sewage Pump Station "D", S-07									Building title suspect
161	Maintenance Service Center, S-07									Building title suspect Building demolished
162	Paint Storage, S-71									Building title suspect Building demolished

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
163	Rubber Shop Annex, S-56							Yes[6]		Building title suspect Pipes with asbestos lagging stacked
203	Power Plant Substation "H" S-03		Softeners, Dilute Sulfuric Acid, Salt Solutions, Asbestos Xylene, Paint, Natural Gas Combustion Products	1 500-gal (corrosive) 4 (55-gal) wastewater 2 (55-gal) unknown oil 2 (20-gal oil) outside 1 (55-gal oil) open		9		Yes		Abandoned steam equipment; possible PCB oil.
204	Salt Water Pump House, S-03		Transformer and lube oil, thinner, paint	Closed containers						
205	Pump and Compressor Plant - PD2, S-03	Western MacArthur	Paints, Solvents, Oils, unknown chemicals, sulfuric acid (12 auto batteries, 11 tins lubricant)	1 (100-gal) unknown chemical 1 (55-gal) unknown 1 (1000-gal) oil tank			1	Yes Yes		Yes Friable asbestos, leakage at substation C. Lubricant tins reported leaking. HLA found no containers outside. 4 electrical units
206	Substation "A" Compressor Plant, S-03					3				Building title suspect.
208	Shop Service									Building title suspect
210	Dispensary									Building title suspect
211	Electric Shop, S-31 and S-51		NaOH, D-Floate, Steam-Kleen, Paints,	Bulging rectangular (<50 gal) tank with		3		Yes		Tank bulging, abandoned transformers

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
			Acids, Hydraulic Fluids,	unknown contents						with leakage, and staining
214	Combat Weapons Systems Office							Yes		Asbestos lagging on boiler, furnace, basement, floor, roof, pipes
215	Fire House		Detergents, oil and grease					Yes		
217	Sheet Metal Shop	Service Engineering	D-floate, Paints, Hydraulic oils Lube oil, Acetylene, Ethylene glycol, Propane	25 (55-gal) lube oil 1 (55-gal) ethylene glycol		3	Yes	Yes		Friable asbestos. Chemicals are Navy property.
219	Substation "E", S-03		Oil (PCBs)	3 (55-gal) oil (PCBs)					Yes	Oil staining in parking lot
225	Work Control Center No. 2		Oil, Freon							Welding machine, refrigerators, ice machine
228	Central Cafeteria		Freon, Oil	1 (55-gal) oil				Yes		Refrigerators, assorted cans of unknown chemicals
229	Substation "L", S-03					5				Building title suspect.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
230	Shop Service, S-56		polyurethane[6]	10-12 (55-gal) polyurethane[6]					Yes[6]	Building title suspect Oil stains noted, indicate drainage of oil toward storm drain.
231	Machine Shop, S-31		Sulfuric and Phosphoric Acid, NaOH, Dichlorobenzene, Hydraulic Fluid, Oil and Cleaning Solvents, Natural Gas Combustion Products, Paint	1 (50-gal) acid 2 (20-gal) unknown 1 (40-gal) oil		2	Yes	Yes	Yes[6]	Leaking transformer Oil Stains on the floor
241	Forge Shop, S-23									Possible Sump
		Golden Gate Heat Treating	Cyanide Compound, Quenching Oil, Toxic Materials, Hydrocarbons	1 200-lb cyanide 2 steel quenching tanks (oil) (1500 gal) open			Yes	Yes	Yes	Stained concrete floor, possibly associated with oil tanks (in-use)
251	Industrial Relations & Control Tool Room, S-99		Solvents, Freon, Carbon TET, TCE	1 (55-gal) solvent 1 (55-gal) oil 1 (75-gal) empty vat labeled acid				Yes		
253	Electronics, Optical & Ordinance Shops		NaOH, Solvent Stoddard Steamclean, Paints, Oakite-A1 Cleaner 164, Paint Sludge, Alkadis, Acids, Hydraulic Fluids, Oil and Cleaning Misc.	1 (55-gal) unknown 2 (55-gal) solvent			Yes	Yes	Yes	6-floor building. stained floor Abandoned transformers and electrical equipment in storage. Leaking brown fluid.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
258	Pipefitters Shop		Muriatic Acid, NaOH, H_2SO_4, Chromic Acid, Penesolve 814, Penestrip, Naconal Powder, Degreasing Steam Cleaning Residues	1 (20-gal) fuel 2 (100-gal) elevated boiler 2 water treatment tanks (muriatic) 11 tanks with drains (pickling).		2		Yes	Yes	Most equipment outdoors is oily with extensive residual contamination; Asbestos pipe lagging, abandoned gas tank;
270	Paint Shop, S-71		NaOH, Paint Buckets D-kleen, Paints	2 (> 100-gallon) open tanks with unknown contents 1 55-gallon drum					Yes	Ground is stained by 2 open (15-gal) tanks; 2 oil spills; 3 transformers not in use
271	Paint Shop Annex, S-71		D-kleen, Paints				Yes	Yes	Yes	White powdery spill; red liquid spill (4 sq. ft.); Friable asbestos.
272	Shop Service Group, S-64, 71, 72, 99		Steam-kleen							
		Carpenter Rigging ERMICO	Oil, acetylene, propane, grease	1 (55-gal) oil open 1 20-lb grease						Open drum in use
273	Substation "GH-2", S-03					3				Building title suspect.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
274	Decontamination Training						Yes,[6]	Yes		"Non-friable" asbestos wallboard.
275	Sheet Metal Annex, S-17	ERMICO	Hydrocarbons Cutting Oil Oil (PCBs) "Poly-fastcut" powder	1 (55-gal) powder				Yes		Improper disposal of oil
276	Substation for Portrans, S-03									Building title suspect
277	Substation for Portrans, S-03									Building title suspect
278	Work In Progress Storage, S-17									Building title suspect Building demolished
279	Materials Storage Racks, S-17			2 (20-gal) unknown liquid[6] open						Building title suspect
280	Covered Work Area, S-17, Alum. Cleaning Facility and Oil Recl. Ponds		$NaPO_4$, Tribasic Wyandotte 2787 Bunker, Lube and Diesel Oils, Dunkit, Slix, Glamlen, Clock 06:39		Deoxidizer, Neutralizer				Yes[6]	Building title suspect[6] Floor is stained

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Trans-formers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
281	Electronics - Weapons - Precision Facility/ Machine Shop		Anion and Cation, Softeners, Metal,	1 (55-gal) tar			Yes [7]	Yes	Yes [6]	Lift gantry may have leaked oil
282	Abrasive Blast Facility		Possible metals,	3 (55-gal) sand with metals		1				Oil staining on concrete under cylinders (5'x5')
300	Substation "N", S-03					4				Building title suspect.
302	Transportation Shop, S-02		Decarbonizer, Degreaser Detergent, Oil Sludge, Solid Flake NaOH,	20 (55-gal) waste oil 1 (100-lb) barrel NaOH 1 (100-lb) barrel NaOH 1 (50-gal) elevated (oil) 1 (55-gal) "trans cleaner"			Yes	Yes	Yes	Some strong odors elevated tank; leaking NaOH; large spill discarded asbestos wallboard HLA observed staining
302A	Transportation Shop Annex, S-02	Universal Painting & Sandblasting (M)	Oil Hydrocarbons, Paints,Chlor. Solvents, Antifreeze, thinner, motor oil, diesel oil, gasoline, acetylene	1 (60-gal) waste oil 2 (550-gal) A/G diesel 1 (800-gal) A/G diesel >5 (55-gal) antifreeze, paints 13 (55-gal) motor oil 1 vat chor. solvents 1-2 (55-gal) fuel/water			Yes	Yes		Sump Area between Bldgs 302A and 304 Open containers, waste oil

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
304	Service Station S-02	Universal Painting and Sandblasting	Gasoline, Diesel		2[4]		Yes			Tanks are mobile and located outside Bldg 304. Sumps located between bldg 302A and 304. No documentation of tank removal Piping remains in place.
306	Substation "I", S-03					1				1 abandoned transformer; leaking transformer
307	Electronic Assembly	Westinghouse		9 (55-gal) unknown liquid[6] open and closed					Yes[6]	Building title suspect Oil leaks on floor Floor cracked in places
309	Sand Blast Plant Annex, S-71									Building title suspect Building demolished
319	Sand Blast Annex, S-71									Building title suspect Building demolished
324	CO_2 Refilling Station	Sunset Fire Protection	Ammonium phosphate, Potassium Bicarbonate, Sodium bicarbonate, liquid CO_2	>8 (50-lb) paper boxes Steel tank (CO_2)				Yes		Friable asbestos

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
351	Electronics Shop		Chem Mist, Detergent, Alcohol, TCE, Ammonium Thiosulfate, Ag, Salts, Acetic Acid, Sodium Sulfite, Oils, solvents			2				Abandoned spray booths third and fourth floors. Improper waste disposal
		Heritage Ornaments								
		Huntar, Inc.								
		Steam Valve Machine Co.		2 (55-gal) solvent 2 (55-gal) oil				Yes		
		Studio D	Argon					Yes		
351A	Electronics Shop/Annex		Chem Mist Detergent, Thinner, Solvent	4 (55-gal) barium sulfate[6]				Yes[6]		One drum was open
		Environmental Measurements								
363	Woodworking Shop, S64			Solvents						
		Quality Craftsman (L)	Adhesive, thinner	3 (55-gal) lacquer 2 (55-gal) adhesive						Inappropriate flammable storage
364	Storage Bldg./ Radiological Research		Waste Types Not Determined							
		Young Lab	Solid Waste (metals)				Yes			Floor drain. Small quantities "potentially very dangerous" chemicals.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
366	Boat & Plastic Shop S-64	Christian Engineering	Epoxies, Polyester Resin, Methylethyl Ketones Waste Oil, Acetylene, Hydraulic Fluid Dymax Packaging (water based)	2 (55-gal) oil 1 (55-gal) sand Propane adhesives 200-lb cardboard drum of adhesives 20 (55 gal) debris[6] 9 (55 gal) oil[6]				Yes	Yes[6]	Runoff has oily sheen. Oil staining on floor. Some drums in poor condition and leaking. Oil stained soil near drums.
368	Shop Service	W. Warham	Oil	1 (55-gallon) drum		4		Yes		Tenant relocated to Bldg. 323. HLA observed 5 (55-gal) drums of PCB oil.
369	Shop Service		Hydrocarbons					Yes	Yes	Large oil stain (40' by 20')
377	Poseidon Systems Test Engineering									Building title suspect
380	Poseidon Partial Full Test Machine									Building title suspect
381	West Coast Shock Test Facility									Building title suspect
382	Poseidon Arresting Engine Shelter									Building title suspect

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
400	SOAP Storehouse		Oil (PCBs), Acetylene	1 (12-gal) oil reservoir 5 bags calcium hypochlorite 8 (5-gal) waste oil		1		Yes	Yes	Friable asbestos pile; 6 oil filter canisters leaking oil reservoir leaking; 2 transformer in storage, 1 leaking; oil filtering unit leaking
401	Public Works Shops S-03 and 07	Diversified Metals	Scrap metal, argon					Yes		
		Eagle Security Service								
		J. Heagly	Sulfuric Acid, Ether,							
		Point Design	Lacquer, paint, cement							
		John DiPaolo								
		S. L. Gordon								
		West Edge	Paints, CO_2, Argon, Thinner	1 (55-gal) paint thinner						
		Baudet Studios								Minor spillage paints
		P. Powers								Tenant unavail. for F-to-F
										Tenant unavail. for F-toF-
402	Storehouse and O&RA Offices	Franciscan Movers				2				
404	Storehouse									
		Mina Corporation	Adhesives, Paints, Acetylene	6 (55-gal) sealer						Used onsite, no waste generated

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
404A	Storehouse	Shamrock Enterprises	Propane					Yes		
405	Storehouse	Miracle Mushrooms	Solvents and Hydrocarbons Oil, Formaldehyde, Chlorine	1 (500-gal) diesel 1 (200-gal) gasoline 1 (55-gal) formaldehyde 1 (55-gal) chlorine 1 (55-gal) oil						Undetermined floor drainage; probable bacterial waste
406	Storehouse	D. Holsworth Mike's Repair Paul's Repair Rick's Auto Body	Undetermined liquid Waste oil, hydrocarbons Oil	1 (55-gal) unknown 6 (55-gal) oil <5 55-gal oil				Yes Yes Yes	Yes	Outdoor waste oil storage; 2 leaking drums
407	SOAP Offices and Storehouse	Amer. Van Lines	Waste Oil	8 (55-gal) oil						Drums stored outside, South of building
408	Furnace Shelter, S-11	Golden Gate Heat Treating	Acetylene or CO_2							2 furnaces
409/410	Welder Motor Generator Hut, S-11		Oily rubbish							Building Title suspect

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
411	Shipfitters Shops, S-11, 26, 41		H_2SO_4, NaCl, Inhibitor, Sodium Dichloromater, PhosphorousAcid, Sand Blast Grit withPaint, Rust Zn Chromate Primer,Resin Thinners, Wyandotte M.F. Acid, Altrex Cleaner, Wyandotte 2487 Acid	2 (55-gal) organic 1 (30-gal) asphalt maker 1 (55-gal) oily water open 130 (55-gal) appear ready for transport 12 (55-gal) soil cuttings		2	Yes	Yes	Yes	2 underground vaults Hydraulic fluid leaking on floor 1 abandoned transformer
		Alamo Body Works Christian Eng. Eric Landsdown	Argon, Paint Thinners Hydrocarbons	1 (55-gal) paint thinner				Yes		
413	Storehouse and Yard		Oil, Oil sludge	16 (55-gal) unknown closed 9 (55-gal) waste oil closed 1 (55-gal) soil closed 24 (55-gal) unknown closed 28 (55-gal) waste oil open-damaged drums 10' x 4' x 4' vat of oil sludge - open 16 (55-gal) new hydraulic closed dumpster of 55-gal drums - oily					Yes	Large quantities of oil and waste oils stored; Some damaged drums; Waste oil between buildings 413 and 414. Spillage on pallet; oil stained soil (30' x 5').
414	Public Works Furniture Storehouse		Fuel Oils			1		Yes	Yes	Waste stored in yard between 413 and 414 (refer to 413). Some spillage and open containers.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
416	Storehouse	Farrell Lines								Building title suspect Tenant unavailable for inspection
418	Q&RA Welding Engineering Facility	Hydro-Chem	NaOH, Oil, Acids, Corrosives	1 (20,000-gal) Baker Tank oily water 280-gal acid 8 (55-gal) NaOH 8 (55-gal) HCL				Yes	Yes	Acids stored outdoors, not bermed; minor acid spillage
435	Equipment Storage, S-07	West Edge	Paint Thinner, Chlorine	Spray Paint 1 (55-gal) paint thinner			Yes			Possible sump
436	Material Storage, S-07	Point Design	NaOH, Detergent, Organics 1 to 5 gallon cans of paints and solvents, some open[6]						Yes[6]	Building appears to be earthquake damaged. Concrete floor is deteriorated.
437	Pipe Storage, S-07									Building title suspect
438	Metal Spray Shelter									Sand covered floor.
439	Sheet Metal Shop		Chlorinated solvents, PCBs, K_2CrO_4, Copper Naphthanate waste oil	8 (55-gal) waste oil 1 (30-gal) dip tank (open) 2 (55-gal) solvent 2 (100-lb) chemical powders 1 (55-gal) waste oil open 1 (55-gal) K_2CrO_4 1 (55-gal) CuNaphthonate		1		Yes		Open drum of oil abandoned;

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Trans-formers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
500	CPO Barracks		Gasoline		1	1		Yes		No documentation of tank removal Piping left in place
505	Navy Exchange			1 (55-gal) unknown		3		Yes		
506-507,	Radiological Research								Yes[6]	Building title suspect
509, 510	options/misc. offices									Stained soil[6] Buildings demolished
510A	Naval Ordinance Laboratory									Building title suspect
511A	Woodworking Hobby Shop									Building title suspect Building demolished
517	Marine Storage									Building title suspect Building demolished
524	Commissary Storehouse									Building title suspect.
525	Storehouse		Chlorinated Solvents, PCBs			9		Yes	Yes[6]	Leaking winches, discolored soil
526	Storehouse & Offices		Sodium, Bisulfate, PCBs (?), Lithium soap, Waste types not determined	1 (55-gal) unknown 2 (120-lb) lithium soap		1		Yes		

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
527	Substation					6				Leaking transformer
528	Substation									Building title suspect
530	Public Works Building		Waste oil, Paints, thinners, lubricants	2 (55-gal) waste oil		8			Yes[6]	Soil staining adjacent to building
531	Storehouse									Building title suspect
704	Transportation Shop Shelter, S-02	Wagner Construction	Hydrocarbons, Gasoline, Waste Oil, Solvent, Hydraulic, oil, Batteries, Acid	1 (6,000-gal) diesel 1 (500-gal) waste oil 5 (55-gal) solvent, oil 2 reservoirs oil open					Yes	Open reservoirs; improper storage; many batteries, contaminated runoff, stain yard.
707	NRDL Animal Colony	Pet Express				3		Yes		Wet Well, friable asbestos.
708	NRDL Bio-Med Facility									Building title suspect.
709	Navy Exchange Gas Station									Building title suspect.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
808	Storehouse	Precision Transport	Waste Oil, Hydrocarbons	8 (55-gal) oil		1				Some open containers (volume unknown).
809	Storehouse									Building title suspect.
810	Storehouse	Bay Area Wastewood	Tarry Substance	2 drums					Yes	Drums are leaking
811	Diesel Oil Platform, S-02									Building title suspect.
812	Sand Blast Shed, S-71									Building title suspect. Building demolished
813	Storehouse & Offices		Paints, Solvents, Flammable liquids, Oils	1 55-gal barrel (contents unknown)		1				EPA evaluated building
815	NRDL					7				Not Navy property
816	NRDL - High Voltage Accelerator Accelerator		Liquid Waste, Pine Tar, Oil, Distilled water, Styrene	7[5]				Yes	Yes	Friable ceiling and pipe lagging. Spillage noted
818	Chlorinating Plant		Non-flammable Gas and Poison						Yes	Six chlorine cylinders Possible stained area north of pavement. Building demolished.

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Trans-formers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
819	Sewage Pump Station "A"									Building title suspect
820	Rad Lab Cyclotron									Building title suspect
821	X-Ray Shield Facility									Building title suspect
823	Building Title not determined		Unknown tank contents	1 5,000-gal						Tank appears empty
830	Navy Biological Laboratory									Building title suspect. Not Navy property
831	Navy Biological Laboratory									Building title suspect
901	Commissioned Officers Mess		White Powder, Asbestos, Gas Cyliner, Cleaner, Paint							
906	Gardeners Tool Shed		Pesticides	10-gal pesticide, solid		3		Yes	Yes	Approximately 15 (1 to 5-gal) containers of pesticides. Staining is apparent inside of building. Asbestos wallboard used.
916	CPO Mess & Package Liquor Store	Dago Mary's Restaurant	Propane			3		Yes		Asbestos friable.
921	Bachelors Officers Quarters					1		Yes		
Area III			Tar	1 (500-gal) Tank tar						

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Trans-formers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
Area IV	West of Building 704		Oil,	Damaged open (55-gal) drums 1 tank (waste oil)			Yes	Yes Yes		Yes Abandoned gas station; scrap metal; spillage over 20 sq ft area.
Area IV	Area IV West of Building 405 across "I" Street	Oil Flammable materials	Assorted open and damaged drums and cans							Most containers are open or damaged
Area VII			Flammable paints, solvents	2 box cars (approx. 14,500 gal)						Former railroad round table
Area X			Waste not determined	Reservoirs (400-500 gal) 55-gal closed drums						
Area XII			Unidentified	Several large capacity tanks						Hydraulic machinery, no apparent leakage
Area XIV			Chlorinated solvents, oils (PCB)	Open bucket (solvents) Open 55-gal drums, Open above-ground tank	Yes			Yes	Yes	Staining near manhole, unknown contents in rusted drum and tanks (appears abandoned)
Pier 1				5'x 5'x 8' container (contents unknown)						

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Transformers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
Pier 2				1 (55-gal) drum contents unknown			Yes		Yes	Staining apparent from dumpster waste
Area 1 Regunning Pier (Berth 15)			Tar	2 (100 gal) drums tar			Yes[6]			Past temporary storage of radioactive waste drums (1950-1959)
North Pier (Berths 6-9)							7			Leaking transformer
South Pier (Berths 10-13)				1 (25-gal) drum (Amerzine) 6 (55-gal) drum open, contents unknown			6			
Drydock 2	Sandblasting						5			Leaking transformer
Drydock 3	Sandblasting									Building title suspect
Drydock 4	Drydock Ship Repair/Sandblasting						4		Yes[6]	Building title suspect. Large oil stains on pavement. "Hazardous Waste Accumulation Area" indicated
Drydock 5	Drydock Ship Repair									Building title suspect

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 There is a discrepancy between ERM West, 1988 and Westec, 1984. One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 3. Sites with Known or Suspected Chemical Usage or Disposal

Building No.	Navy Building Activities	Tenant	Inventoried Chemical[1]	Large (>10 gal) Storage Containers[1]	Number of Aboveground Tanks[2]	Number of Trans-formers[3]	Sump[1]	Asbestos[1]	Leak or Spill[1]	Comments
Drydock 6	Drydock Ship Repair		TCE	1 (5-gal) can open (TCE)						
Drydock 7	Drydock Ship Repair									Building title suspect
Near Bldgs 408, 409, & 410	Sand Blasting Garage		Piles of sand	1 (55-gal) unknown						Sand blasting. HLA observed staining in yard.
Area bounded by Meanseau, Morell, and "E" Streets	—	—	—						Yes	Stained soil *Unidentified Materials* Storage
Area bounded by Nimitz, Blandy and "C" Streets	—	—	—	—			Yes[6]			Two underground utility vaults, one with oily floor and walls

1 Source: ERM West, 1988 unless otherwise indicated.

2 Source: Westec, 1984 unless otherwise indicated.

3 Source: YEI, 1989, unless otherwise indicated.

4 *There is a discrepancy between ERM West, 1988 and Westec, 1984.* One tank is reported by Westec and 2 are reported by ERM West.

5 Source: Westec, 1984.

6 Source: HLA site visit - February 25 through 26, 1991.

7. Based on HLA observations sump may not be present.

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	101	J. Terzian/ The Point	Administration Office/ Reproduction Dept.	ERM West 1988 WESTEC 1984 NEESA EMCON 1987	No Action Asbestos Program
NA	102	--	Employment Office	ERM West 1988	Asbestos Program
NA	103	J. Terzian/ The Point	COMSUB Barracks	ERM West 1988	No Action
NA	104	J. Terzian/ The Point	Naval Reserve Armory	ERM West 1988	No Action
NA	105	--	Tower	--	No Action
NA	106	--	Tower	--	No Action
PA-42	109	Harbor Leasing and Sales	Police Station	ERM West 1988	Sample Soil Sample Reservoir Contents
NA	110	J. Terzian/ The Point	Marine Barracks	ERM West 1988	Asbestos Program
PA-42	113	--	Tug Maintenance; Salvage Divers; Substation "S"	WESTEC 1984 NEESA ERM West 1988 EMCON 1987	Sample Soil Sample Sump Contents Asbestos Program
NA	113A	--	Q&RA Non-Destructive Test Facility	HLA 1991	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-31	114	Smith/Emery	Office Building	ERM West 1988	Asbestos Program Inspect Reservoirs
NA	115	Finish Works MicroKinetics Reardon Jewelry Sonic Incision	COMSUBGRUSFRAN Office & Training Building	ERM West 1988	Asbestos Program
NA	116	Frameworks Mokko Shop Moosewood Furniture	COMSUB Training Building	ERM West 1988 EMCON 1987	Asbestos Program
NA	117	J. Terzian/ The Point	COMSUB Barracks	ERM West 1988	Asbestos Program
NA	118	--	COMSUB BOQ & Mess Hall	--	No Action
NA	119	--	COMSUB CPO Barracks	--	No Action
NA	120	S.F. Police Athletic Club	Enlisted Men's Club	ERM West 1988 EMCON 1987	No Action
NA	121	Martin Christians Ocean Spray Plaster Biggs Construction Plastic Fabrication Wendell Clark Thee Tireman	Civilian Training Center	ERM West 1988 EMCON 1987	No Action
NA	122	--	Substation "V" & Compressor Plant, S-03	HLA 1991	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-24	124		Acid Mixing Plant	NEESA WESTEC 1984	Inspect Site Sample Soil
PA-24	125	Kimberly Vinegar Tad Bridenthal	Submarine Cafeteria	ERM West 1988 EMCON 1987	Confirm Presence of SOCs In Soil Asbestos Program
PA-24	128	Miller Pipeline Company	Shop Service & Work Control Center No. 1	ERM West 1988 EMCON 1987	Confirm Presence of SOCs in Soil Sample Runoff
NA	129	--	Submarine Pier Office	EMCON 1987	No Action
PA-24	130	Engel Engineering Protective Finishes	Shop Service	ERM West 1988	Asbestos Program Inspect Site
NA	131	--	Substation "U", S-03	HLA 1991	Include with Previous Transformer Sites
NA	132	--	Service Craft Barracks	--	No Action
NA	133	--	Latrine	EMCON 1987	No Action
PA-25	134	Oda Refrig. Touring Gear	Machine Shop & Q&RA Offices, S-06 & 38	WESTEC 1984 ERM West 1988 HLA 1991	Sample Degreasing Vat Contents Sample Soil Near Degreasing Vat Asbestos Program
NA	135	--	Substation "G", S-03	HLA 1991	Inspect Building Interior
NA	140	--	Pump House - Drydock No. 3	--	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	141	--	Dock Shipwrights Shop, S-64	ERM West 1988 HLA 1991	No Action
NA	142	--	Air Raid Shelter (Storage)	HLA 1991	Review records to evaluate type of materials previously stored.
NA	144	--	Latrine	--	No Action
NA	145	--	Salt Water Pump House, S-03	--	No Action
PA-23	146	--	TACAN Facility, S-67	ERM West 1988 NEESA	Sample Soil Near Staining
NA	150	--	Bus Shelter - Galvez Avenue	--	No Action
NA	151	--	Bus Shelter - West of Building 813	--	No Action
NA	152	--	Bus Shelter - Robinson Street	--	No Action
NA	154	A&D Marine Rubber	Area Time Office No. 1	ERM West 1988	No Action
NA	155	--	Area Time Office No. 2	--	No Action
IR-20	156	Morgan Chem.	Rubber Shop, S-56	ERM West 1988 HLA 1988c EMCON 1987	Sample sump contents Soil and Groundwater Investigation Asbestos Program
PA-26	157	--	Q&RA Ind. Lab. Non-Destructive Test	ERM West 1988 HLA 1991	Sample Soil From Stained Area

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	158	--	Sentry House - Main Gate	--	No Action
NA	159	--	Latrine	EMCON 1987	No Action
NA	160	--	Sewage Pump Station "D", S-07	HLA 1991	Potential contaminants will be addressed in sewer study
PA-23	161	--	Maintenance Service Center, S-07	HLA 1991	Near Surface Soil Samples
PA-23	162	--	Paint Storage, S-71	HLA 1991	Near Surface Soil Samples
NA	163	--	Rubber Shop Annex, S-56	HLA 1991	Asbestos Program
NA	201	--	Tugmasters Office	--	No Action
PA-29	203	--	Power Plant - Substation "H", S-03	ERM West 1988 WESTEC 1984 NEESA	Asbestos Program Inspect Site Sample Soil
NA	204	--	Salt Water Pump House, S-03	ERM West 1988	No Action
PA-27	205	Western MacArthur	Pump and Compressor Plant - DD 2, S-03	ERM West 1988	Sample Soil Asbestos Program
NA	206	--	Substation "A" & Compressor Plant S-03	HLA 1991	Inspect Building Interior
NA	207	--	Latrine	ERM West 1988	No Action
NA	208	--	Shop Service	HLA 1991	No Action
NA	210	--	Dispensary	--	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-28	211	--	Electric Shop, S-31 & 51	ERM West 1988 WESTEC 1984 NEESA	Sample Contents of Tank Sample Stained Area Asbestos Program
NA	214	--	Combat Weapons Systems Office	ERM West 1988	Asbestos Program
NA	215	--	Firehouse	WESTEC 1984 NEESA ERM West 1988	Asbestos Program
PA-29	217	Service Engineering	Sheetmetal Shop, S-17	WESTEC 1984 NEESA ERM West 1988 HLA 1991	Sample Soil Near Sump Asbestos Program
NA	218	--	Latrine	--	No Action
PA-28	219	--	Substation "E", S-03	ERM West 1988	Sample Soil in Stained Area
NA	224	--	Air Raid Shelter (Storage)	HLA 1991	Review records to evaluate type of materials previously stored.
NA	225	--	Work Control Center No. 2	ERM West 1988 HLA 1991	No Action
NA	226	--	Latrine	--	No Action
NA	228	--	Central Cafeteria	ERM West 1988	Asbestos Program
NA	229	--	Substation "L", S-03	HLA 1991	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-28	230	--	Shop Service, S-56	HLA 1991	Sample Runoff Sample Stained Area
PA-28	231	--	Machine Shop, S-31	ERM West 1988 WESTEC 1984 HLA 1991	Sample Sump Contents Sample Soil Near Sump Asbestos Program Sample Soil Near Leaking Transformer Soil samples under asphalt stains.
NA	232	--	Bus Shelter (Jerrold & Donahue)	WESTEC 1984	No Action
NA	234	--	Latrine and Ships Office	--	No Action
NA	235	--	Supervision & Storage, S-17	HLA 1991	Review records to evaluate type of material previously stored.
NA	236	--	Salt Water Pump House, S-03	--	No Action
PA-30	241	Golden Gate Heat Treating	Forge Shop, S-23	ERM West 1988	Sample Sump Contents Sample Stained Area Asbestos Program
NA	251	--	Industrial Relations & Central Tool Rm, S-99	ERM West 1988 NEESA	Asbestos Program
NA	252	Golden Anchor Restaurant	Bus Terminal	ERM West 1988	No Action
PA-28	253	--	Electronics, Optical, & Ordinance Shops	ERM West 1988 WESTEC 1984 NEESA	Sample Sump Contents Sample Leak Area Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-28	258	--	Pipefitters Shop	ERM West 1988 WESTEC 1984 NEESA	Sample Stained Soil Sample Abandoned Tank Asbestos Program
PA-28	270	--	Paint Shop, S-71	ERM West 1988 WESTEC 1984 NEESA	Sample Soil in Stain Area
PA-28	271	--	Paint Shop Annex, S-71	NEESA ERM West 1988	Sample Soil At Spill Area Asbestos Program
NA	272	Carpenter Rigging ERMICO	Shop Service Group, S-64, 71, 72, 99	ERM West 1988 HLA 1991	No Action
NA	273	--	Substation "GH-2", S-03	HLA 1991	No Action
PA-35	274	Holmes	Decontamination Training Manseau St. by 368	ERM West 1988 HLA 1991	Sample Vault Contents Sample Soil Near Vault Asbestos Program
PA-29	275	ERMICO	Sheet Metal Annex, S-17	ERM West 1988	Review Disposal Procedures Inspect Site Asbestos Program
NA	276	--	Substation for Portrans, S-03	--	No Action
NA	277	--	Substation for Portrans, S-03	--	No Action
NA	278	--	Work in Progress Storage, S-17	HLA 1991	Review records to evaluate type of materials previously stored.

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-29	279	--	Material Storage Racks, S-17	HLA 1991	Remove drums. Review records to evaluate type of materials previously stored.
PA-29	280	--	Covered Work Area, S-17/ Al Cln Facil & Oil Recl Ponds	ERM West 1988 WESTEC 1984 NEESA HLA 1991	Sample Soil
PA-28	281	--	Electronics-Weapons-Precision Facility/Machine Shop	ERM West 1988 WESTEC 1984 HLA 1991	Sample Sump Contents Sample Soil Near Sump Sample Soil Beneath Buckled Areas of Floor Asbestos Program
PA-29	282	--	Abrasive Blast Facility	ERM West 1988	Sample Stained Area
NA	300	--	Substation "N", S-03	--	No Action
NA	301	--	Latrine	--	No Action
PA-33	302	--	Transportation Shop, S-02	WESTEC 1984 NEESA ERM West 1988 HLA 1991	Sample Sump Contents Sample Soil Near Sump Sample Spill Area Asbestos Program
PA-33	302A	Universal Painting & Sandblasting	Transportation Shop Annex, S-02	ERM West 1988 HLA 1991	Sample Sump Contents Sample Soil Near Sump Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-33	304	Universal Painting & Sandblasting	Service Station, S-02	ERM West 1988 HLA 1991	Sample Sump Contents Sample Soil Near Sump Inspect/Sample Piping
PA-35	306	--	Substation "I", S-03	--	Sample Soil Near Leaky Transformer
PA-55	307	--	Electronic Assembly	EMCON 1987 HLA 1991	Sample Oil On Floor Sample Soil Beneath Cracks in Floor
NA	308	--	Salt Water Pump House, S-03	--	No Action
NA	308A	--	Salt Water Pump House Addition, S-03	--	No Action
NA	309	--	Sand Blast Plant Annex, S-71	HLA 1991	Review records to evaluate past activities
NA	311	--	Latrine and Ships Office	--	No Action
NA	319	--	Sand Blast Annex, S-71	EMCON 1987 HLA 1991	Review records to evaluate past activities.
NA	322	--	Marine Guard and Pass Office	--	No Action
NA	323	Louis McBride	Shore Activities Electronics	NEESA ERM West 1988	No Action
NA	324	Sunset Fire Protection	CO_2 Refilling Station, S-99	ERM West 1988	Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-34	351	Heritage Ornaments Huntar, Inc. Steam Valve Machine Co. Studio D	Electronics Shop	WESTEC 1984 ERM West 1988 NEESA	Inspect Site Review Waste Disposal Asbestos Program
NA	351A	Environmental Measurements	Electronics Shop Annex	WESTEC 1984 ERM West 1988 HLA 1991	Asbestos Program
NA	363	Quality Craftsman	Woodworking Shop, S-64	ERM West 1988	No Action
PA-33	364	Young Lab	Storage Building/ Radiological Research	ERM West 1988 WESTEC 1984 HLA 1991	Sample Sump Contents Sample Soil Near Sump Vault
NA	365	--	Storage Building/ Pipefitters	ERM West 1988	No Action
PA-34	366	Christian Eng. Dymax Packaging	Boat & Plastic Shop, S-64	WESTEC 1984 NEESA ERM West 1988 HLA 1991	Remove Drums Sample Runoff Sample Concrete and Soil in Storage and Leak Areas Asbestos Program
NA	367	--	Ship Superintendent Field Office		No Action
IR-22	368	W. Wareham W. Pahl	Shop Service	ERM West 1988 HLA 1987b EMCON 1987	Soil and Groundwater Investigation Asbestos Program
IR-22	369	--	Shop Service	ERM West 1988 HLA 1987b EMCON 1987	Soil and Groundwater Investigation Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	370	--	Latrine	NEESA EMCON 1987	No Action
PA-36	371	S&W Productions Circosta Iron & Metal	Equipment Storage, S-02 "R" St. by Bldg. 704	ERM West 1988 EMCON 1987	Sample Soil
NA	372	--	Prefab Decking Shelter, S-64	--	No Action
NA	373	--	Poseidon Control Hut No. 2 & 5	--	No Action
NA	374	--	Poseidon Office & Instrument Hut	--	No Action
NA	375	--	Poseidon Control Hut No. 3 & 4	--	No Action
NA	376	--	Poseidon Control Hut No. 1	--	No Action
NA	377	--	Poseidon Systems Test Engineering		No Action
NA	378	--	Latrine	NEESA	No Action
NA	379	--	Poseidon Instrumentation & Control	--	No Action
NA	380	--	Poseidon Partial Full Test Machine	--	No Action
NA	381	--	West Coast Shock Test Facility	--	No Action
NA	382	--	Poseidon Arresting Engine Shelter	--	No Action
PA-32	383	--	Title Undetermined	EMCON 1987	Confirm Presence of SOCs in Soil

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-36	400	--	SOAP Storehouse	ERM West 1988 PSC 1987 EMCON 1987	Sample Leak Area Asbestos Program
PA-37	401	Diversified Metal Eagle Security Service J. Heagy Point Design John DiPaolo S.L. Gordon West Edge Baudet Studios P. Powers	Public Works Shop, S-03 & 07	ERM West 1988	Sample Spill Area Asbestos Program
NA	402	Franciscan Movers	Storehouse & Q&RA Offices	ERM West 1988	No Action
NA	403	--	Bus Shelter -	--	No Action
NA	404	Mina Corp.	Storehouse	ERM West 1988	Asbestos Program
PA-36	404A	Shamrock Enterprises		ERM West 1988 HLA 1991	Sample Soil Asbestos Program
PA-36	405	Miracle Mushroom	Storehouse	ERM West 1988	Inspect Floor Drainage
PA-36	406	D. Holsworth Mike's Repair Paul's Repair Rick's Auto Body	Storehouse	ERM West 1988 EMCON 1987	Sample Leak Area Asbestos Program
NA	407	American Van Lines	SOAP Offices & Storehouse	ERM West 1988	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-44	408	Golden Gate Heat Treating	Furnace Shelter, S-11	ERM West 1988	Sample Soil
PA-44	409	--	Welder Motor Generator Hut, S-11	--	Sample Soil
PA-44	410	--	Welder Motor Generator Hut, S-11	ERM West 1988	Sample Soil
PA-33	411	Alamo Body Works Christian Eng. Eric Landsdown	Shipfitters Shops, S-11, 26, 41	WESTEC 1984 NEESA ERM West 1988	Sample Vault Contents Sample Leak Area Sample Soil Near Vault Asbestos Program
NA	412	--	Railroad Scales, S-02 by Spear St.	--	No Action
PA-36	413	--	Storehouse and Yard	ERM West 1988 EMCON 1987	Sample Stained Soil
PA-36	414	--	Public Works Furniture Storehouse and Yard	ERM West 1988	Sample Spill Area Asbestos Program
NA	415	--	Storehouse	HLA 1991	Review records to evaluate type of material previously stored.
NA	416	Farrell Lines	Storehouse	ERM West 1988 HLA 1991	Review records to evaluate type of material previously stored.
PA-33	418	Hydro-Chem	Q&RA Welding Engineering Facility	ERM West 1988	Sample Spill Area Asbestos Program
NA	419	--	Oxygen Converter, S-99	--	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	420	--	Oxygen Cylinder Changing S-99	--	No Action
NA	421	--	Oxygen Control, S-99	--	No Action
NA	422	--	Office and Latrine	--	No Action
PA-37	423	--	Compressor Hut and Paint Storage, S-11	HLA 1991	No Action
NA	424	--	Area Time House No. 4	--	No Action
NA	425	--	Area Time House No. 5	--	No Action
PA-37	435	West Edge	Equipment Storage, S-07	WESTEC 1984 NEESA ERM West 1988	Sample Sump Contents If Present
PA-37	436	Point Design	Material Storage, S-07	WESTEC 1984 NEESA ERM West 1988 HLA 1991	Sample Concrete and Soil Inside Building Remove Solvent and Paint Containers
NA	437	--	Pipe Storage, S-07	--	No Action
PA-44	438	--	Metal Spray Shelter, S-11 (by Manseau St.)	HLA 1991	Remove Sand and Inspect Floor
NA	439	--	Sheet Metal Shop	ERM West 1988	Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-38	500	--	CPO Barracks	ERM West 1988 EMCON 1987	Sample Soil in Previous Tank Location Inspect/Sample Piping
NA	501	--	Ships Barracks	EMCON 1987	No Action
NA	502	--	Ships Barracks	--	No Action
NA	503	--	Ships Substinence and Laundry	EMCON 1987	No Action
PA-39	505	--	Navy Exchange	ERM West 1988 EMCON 1987	Confirm Presence of SOCs in Soil Asbestos Program
PA-38	506	--	Radiological Research Options/ Housing, Navy Exchange & ROICC Offices	WESTEC 1984 HLA 1991	Sample Stained Areas
PA-38	507	--	Radiological Research Options Public Works Office/	WESTEC 1984 EMCON 1987 HLA 1991	Sample Soil
NA	508	--	Locker Club	--	No Action
PA-38	509	--	Radiological Research Options/ Library	WESTEC 1984 EMCON 1987 HLA 1991	No Action
PA-38	510	--	Radiological Research Options/ Naval Investigation Service	WESTEC 1984 HLA 1991	Sample Soil
NA	510A	--	Naval Ordinance Laboratory	--	No Action
NA	511	--	SUPSHIP 12 Offices	--	No Action

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-54	511A	--	Woodworking Hobby Shop	HLA 1991	Sample Soil
NA	512	--	Elementary School	--	No Action
NA	513	--	Ships Barracks	--	No Action
NA	514	--	Ships Barracks	EMCON 1987	No Action
NA	515	--	Military Services	EMCON 1987	No Action
NA	516	--	Ships Barracks	--	No Action
NA	517	--	Marine Storage	HLA 1991	No Action
NA	518	--	Movie Theater	EMCON 1987	No Action
NA	519	--	Chapel & Religious Center	--	No Action
NA	520	--	Dental Cubic	EMCON 1987	No Action
NA	521	--	Power Plant-South Area, S-03	--	No Action
NA	522	--	Bus Shelter - Manseau & I Streets	--	No Action
NA	523	--	Salt Water Pump House, S-03	--	No Action
PA-39	524	--	Commissary Storehouse	EMCON 1987	Confirm Presence of SOCs in Soil
PA-53	525	--	Storehouse	ERM West 1988 EMCON 1987 HLA 1991	Sample Stained Area Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	526	--	Storehouse & Offices	ERM West 1988	Asbestos Program
PA-40	527	--	Substation by Berth 31	HLA Site Visit	Sample Soil Near Leaking Transformer
NA	528	--	Substation	HLA 1991	No Action
NA	529	--	PPO Tape Vault	--	No Action
PA-53	530	--	Public Works Building (Formerly Automotive Hobby Shop)	ERM West 1988 WESTEC 1984 NEESA EMCON 1987 HLA 1991	Sample Stained Soil
NA	531	--	Storehouse		No Action
NA	600	J. Treadwell	Bachelor Enlisted Mens Quarters	ERM West 1988	No Action
NA	702	--	Storehouse and NSC office	--	No Action
PA-36	704	Wagner Construction, G.B. Debris Box	Transportation Shop Shelter, S-02	ERM West 1988 EMCON 1987	Inspect Reservoirs Sample Runoff Sample Stained Area
PA-39	707	Pet Express	NRDL Animal Colony	ERM West 1988 EMCON 1987	Confirm Presence of SOCs in Soil Asbestos Program
NA	708	--	NRDL Bio-Med Facility	--	No Action
NA	709	--	Navy Exchange Gas Station	EMCON 1987	No Action (UST Program)

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-36	710	--	Latrine	EMCON 1987	Confirm Presence of SOCs in Soil
NA	803	--	Commissary	--	No Action
NA	805	--	Guard Shelter - Crisp Avenue	--	No Action
NA	807	--	Scrap Yard Shed	HLA 1991	Covered under IR-4
NA	808	Precision Transport	Storehouse	ERM West 1988 HLA 1991	No Action
NA	809	--	Storehouse	HLA 1991	Review records to evaluate types of materials previously stored
IR-21	810	Bay Area Wastewood	Storehouse	HLA 1989a	Soil and Groundwater Investigation
NA	811	--	Diesel Oil Platform, S-02	--	No Action
NA	812	--	Sand Blast Shed, S-71	HLA 1991	Review records to evaluate past activities
NA	813	--	Storehouse & Offices	NEESA ERM West 1988	No Action
PA-41	816		NRDL - High Voltage Accelerator/Radiological Defense Lab	ERM West 1988 WESTEC 1984 NEESA	Sample soil Asbestos Program
NA	817A	--	Sentry House - Outside South Gate	--	No Action
PA-41	818	--	Chlorinating Plant	ERM West 1988 HLA 1991	Sample Stained Area

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	819	--	Sewage Pump Station "A"	ERM West 1988 HLA 1991	Will be addressed in sewer study
NA	821	--	X-Ray Shield Facility	HLA 1991	Inspect Inside of Building
IR-19	901	--	Commissioned Officers Mess	ERM West 1988 HLA 1988b	Soil and Groundwater Investigation
PA-43	906	--	Gardeners Tool Shed	ERM West 1988 HLA 1991	Sample Soil in Shed Asbestos Program
NA	907	--	Garage (5 Car)	--	No Action
NA	908	--	Garage (8 Car)	--	No Action
NA	909	--	Garage (2 Car)	--	No Action
NA	915	--	Bank	--	No Action
NA	916	Dago Mary's Restaurant Astro Copters	CPO Mess & Package Liquor Store	ERM West 1988	Asbestos Program
NA	917	--	Store - Outside Main Gate	--	No Action
NA	918	--	Garage (Quarters R66A)	--	No Action
NA	919	--	Garage (Quarters R94)	--	No Action
NA	920	--	Garage (Quarters "C")	--	No Action
NA	921	--	Bachelors Officers Quarters	ERM West 1988	Asbestos Program

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
NA	E-56	--	Thrift Shop (Homoja Hut)	--	No Action
NA	E-105	--	Child Care Center (Homoja Hut)	--	No Action
NA	S308	--	--	ERM West 1988	No Action
NA	Area III	--	--	ERM West 1988	No Action
PA-36	Area IV	West of Building 405	--	ERM West 1988 EMCON 1987	Confirm Presence of SOCs in Soil
PA-56	Area VII	--	--	ERM West 1988 HLA 1991	Sample Soil
NA	Area X	--	--	ERM West 1988	No Action
PA-32	Area XI	--	Regunning Pier	ERM West 1988 HLA 1991	Sample Vault Contents
NA	Area XII	--	--	ERM West 1988	No Action
PA-26	Area XIV	--	--	ERM West 1988	Sample Stained Soil Asbestos Program
NA	Pier 1	--	--	ERM West 1988	No Action
PA-40	Pier 2	--	--	ERM West 1988	Sample Stained Area
PA-32	Regunning Pier Berth 15	--	--	ERM West 1988 HLA, 1991	Screen for Radioactivity

Table 4. HPA Building/Site Summary

Site No.	Bldg./Area No.	Tenant Name	Navy Building Title	References	Recommendation
PA-57	Dry Dock 4 Area	--	--	HLA 1991	Soil Samples from Beneath Pavement in Stained Areas
PA-35	Area bounded by Manseau, Morell "E" Streets	--	--	HLA 1991	Sample Stained Areas Sample Stored Material
PA-29	Area bounded by Nimitz, Blandy and "C" Streets			HLA 1991	Sample Vault Contents Soil Samples
PA-58	Scrap Yard across from Building 258	--	--	HLA 1991	Sample Soil.

Table 5. Grouping and Prioritization of Sites Identified for Investigation

Site Number	Buildings/Areas Within Site	Remedial Investigation	Site Inspection High	Site Inspection Medium	Site Inspection Low
IR-19	901	X			
IR-20	156	X			
IR-21	810	X			
IR-22	368, 369	X			
PA-23	146, 161, 162		X		
PA-24	124, 125, 128, 130			X	
PA-25	134			X	
PA-26	Area XIV, 157		X		
PA-27	205		X		
PA-28	211, 219, 230, 231, 253, 258, 270, 271, 281		X		
PA-29	203, 217, 275, 279, 280, 282, Area bounded by Nimitz, Blandy and "C" Streets			X	
PA-30	241			X	
PA-31	114				X
PA-32	Regunning Pier, 383		X		
PA-33	302, 302A, 304, 364, 411, 418		X		
PA-34	351, 366		X		
PA-35	274, 306, Area bounded by Manseau, Morell and "E" Streets		X		
PA-36	371, 400, 404A, 405, 406, 413, 414, 704, 710 Parts of Area IV		X		
PA-37	401, 423, 435, 436			X	
PA-38	500, 506, 507, 509, 510			X	
PA-39	505, 524, 707		X		

Table 5. Grouping and Prioritization of Sites Identified for Investigation

Site Number	Buildings/Areas Within Site	Remedial Investigation	Site Inspection High	Site Inspection Medium	Site Inspection Low
PA-40	Pier 2, 527				X
PA-41	816, 818		X		
PA-42	109, 113		X		
PA-43	906			X	
PA-44	Area Near Buildings 408, 409, 410, 438				X
PA-45	Steam Lines		X		
PA-46	Chemical Distribution Lines, Tank Farm		X		
PA-47	Chemical Distribution Lines, Tank S505		X		
PA-48	Chemical Distribution Lines, Building 503		X		
PA-49	Chemical Distribution Lines, Building 205		X		
PA-50	Storm and Sanitary Sewers		X		
PA-51	Previous Transformer Sites			X	
PA-52	Railroad Right-of-Way		X		
PA-53	525, 530		X		
PA-54	511A				X
PA-55	307		X		
PA-56	Area VII, Railroad Tracks				X
PA-57	Drydock 4 Area		X		
PA-58	Scrap Yard (Across from Building 258)			X	

TABLE 6. SUMMARY OF RECOMMENDED ACTIONS FOR ADDITIONAL SITES RECOMMENDED BY EPA, HUNTERS POINT ANNEX

BLDG	SITE	DESCRIPTION	EPA OBSERVATIONS	NAVY RECOMMENDED SI ACTION*
214	NA	Combat Weapons Systems Office	Aerial photos show stains on the paving west of building 214.	No action
--	PA-29	Area bounded by Nimitz, Blandy and "C" Streets	1965 aerial photo shows apparent transformer pad, asphalt stains and circular structure.	Sample vault contents. Soil samples.
231	PA-28	Machine Shop	Aerial photos show asphalt stains at the north entrance of the building.	Near surface soil samples.
252	NA	Bus Terminal	Aerial photos show stains on the paving west of building 252.	No action
258	PA-58	Scrap Yard	Aerial photos shows a stain north of building 258(Pipe Fitters Shop) in what is now the scrap metal yard.	Soil samples
270	PA-28	Paint Shop	Aerial photos show stains on paving east of building 270.	Sample soil in stain area.
271	PA-28	Paint Shop Annex	Aerial photos show a stain between buildings 271 and 272.	No action**
371	PA-36	Equipment Storage	Aerial photos show a possible oil stain west of building 371.	Soil samples
530	PA-53	Public Works(Auto Hobby)	Aerial photos show stains at both ends of building 530.	Sample stained soil.

* This table includes recommended action to address the EPA comments. See Table 4 for a complete list of recommenmded SI action for each building or area.

** No action is recommended regarding the reported stain. However, this site is recommended for inclusion in the SI program based on information obtained in the draft PA report for the other area/utilities.

Appendix B

NAVY RESPONSES TO AGENCY COMMENTS ON DRAFT SITE INSPECTION WORK PLAN: PA OTHER AREAS/UTILITIES, VOLUME III OF III: 26 SITES

NAVY RESPONSES TO EPA COMMENTS

The following are the Navy's responses to comments made by the U.S. Environmental Protection Agency (EPA), Region IX, on the *Site Inspection Work Plan: PA Other Areas/Utilities, Volume III of III: 26 Sites, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* The EPA transmitted their comments in a letter to the Navy dated May 15, 1992.

GENERAL COMMENTS

COMMENT NO. 1

Section 1.0. A sampling objective(s), including a description of decisions that will be made based on the sampling and analytical results, should be included. Without this objective, it is difficult to assess the sampling rationale and analytical approach.

RESPONSE TO COMMENT NO. 1

Section 1.1 of the Work Plan has been added to describe the sampling objectives and uses of the results.

COMMENT NO. 2

The discussion of field procedures relies heavily on requirements specified in "Work Plan - Volume 3 Quality Assurance Project Plan, Remedial Investigation/Feasibility Study Naval Station, Treasure Island Hunters Point Annex," (QAPjP). The SI Work Plan, however, presents several sampling challenges not specifically addressed in the QAPjP (see specific comments below).

RESPONSE TO COMMENT NO. 2

Sampling techniques specified in the Work Plan have been compared to those presented in the QAPjP. Those sampling techniques not specified in the QAPjP have been incorporated into the text of the Draft Final Work Plan as follows:

Section 4.5	Collection of floor residue, sandblast material, and bulk samples
Section 4.6	Collection of liquid samples from containments
Section 4.8	Sample compositing

SPECIFIC COMMENTS

COMMENT NO. 3

Page 9, Section 3.2, Paragraph 2. No provision is made for testing pH of liquids in tanks, sumps, etc. All liquids should be tested for pH both as a characterization tool and as a safety precaution.

RESPONSE TO COMMENT NO. 3

The pH for all liquids sampled will be measured. The Draft Final Work Plan has been modified to include liquid pH measurements.

COMMENT NO. 4

Page 13, Section 4.2, and Page 15, Section 4.5. These sections should specify the details of composite sample preparation. How will the locations of constituent samples be determined? How will subsamples of composites be obtained? What precautions will be taken to prevent the loss of VOCs during composite preparation? State what measures will be taken to assure that the composite is representative.

RESPONSE TO COMMENT NO. 4

Samples will be composited by the analytical laboratory. Methods for compositing will be established with the laboratory and will include weight-proportioned aliquots for solid or soil composites and volume proportioned aliquots for liquids. Compositing will be performed immediately prior to sample extraction or analytical preparation to preserve sample integrity, especially for VOCs. Liquid samples recommended for compositing have been free standing and exposed to ambient conditions, likely for years. The potential presence of VOCs is considered minimal. Constituent sample locations have been identified in the exhibits and were selected according to similar matrix, color, or relative texture. Section 4.8 of the Draft Final Work Plan has been modified to address sample compositing techniques.

COMMENT NO. 5

Page 15, Section 4.6. This section should include a requirement that the rationale for selecting a particular sampling device must be documented in the field log-book.

RESPONSE TO COMMENT NO. 5

Section 4.6 of the Draft Final Work Plan has been modified to state that field log-book notations will be made as sampling devices are chosen and used.

COMMENT NO. 6

Page 17, Section 4.9. The frequency and nature of field QC samples should be specified in a table analogous to Table 4. The frequencies and nature of field QC samples should be consistent with SW-846, Chapters 1 and 9.

RESPONSE TO COMMENT NO. 6

Section 4.10 of the Draft Final Work Plan has been modified to include a table with proposed quality control samples.

COMMENT NO. 7

Exhibit 28. Task 2 provides for drilling and sampling eight soil borings with four borings completed as monitoring wells. Examination of the subsequent summary table and revised Plate PA-28b shows six borings plus four monitoring wells.

RESPONSE TO COMMENT NO. 7

A revised set of plates issued on May 5, 1992 shows sample designations. These corrected plates will be included in the Draft Final Work Plan. The corrected Plate PA-28b shows eight borings and four monitoring wells.

COMMENT NO. 8

Exhibits 28, 30, and 33. Installation of monitoring wells is proposed, but it is not clear whether the number of samples listed in the summary tables includes groundwater samples to be collected from these wells. Re-examination of Sections 4.3 and 4.4 suggests that the five samples listed in the summary tables include:

- **3 soil samples collected above the water table,**
- **1 soil sample collected immediately below the water table, and**
- **1 groundwater sample collected during a single groundwater sampling round.**

If this is correct, the summary tables would be improved by listing the four soil samples and the one groundwater separately under each sampling location.

RESPONSE TO COMMENT NO. 8

The Draft Final Work Plan indicates the type and number of samples to be collected at each monitoring well designation. A footnote in Exhibits 28, 30, and 33 explains the rationale for monitoring well sample collection.

COMMENT NO. 9

Exhibit 33, Building 364. Will this area (Radiological Research) be investigated for radioactivity by other investigations (Radiation Survey, etc.)? No reference to analysis of SI samples for radioactive analytes is provided and this building is not listed in Section 2.3.5.

RESPONSE TO COMMENT NO. 9

PRC is implementing radiation monitoring at HPA. Building 364 has been proposed for Phase II of the radiation monitoring program. This has been noted in Section 2.3.5.

NAVY RESPONSES TO DTSC COMMENTS

The following are the Navy's responses to comments made by the State of California Department of Toxic Substances Control (DTSC), Region 2, on the *Site Inspection Work Plan: PA Other Areas/Utilities, Volume III of III: 26 Sites, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* The DTSC presented their comments in a letter to the Navy dated June 5, 1992.

GENERAL COMMENTS

COMMENT NO. 1

At recent meetings, the Navy has proposed to handle the Parcel A sites separately from the other PA/SI sites. This approach is acceptable to the Department.

RESPONSE TO COMMENT NO. 1

Comment noted. Discussions regarding the parcelization approach are ongoing.

COMMENT NO. 2

The Department encourages the use of contingency planning for the soil and groundwater investigations. If contamination is observed at the time of field investigations it is expedious to continue to define the extent of contamination while still in the field. Please notify the Department through the Field Variance process.

RESPONSE TO COMMENT NO. 2

The Navy appreciates the DTSC's flexibility in handling changed conditions while conducting field investigations, and will continue to use the Field Variance process as appropriate. However, the goals of the SI program are to establish the occurrences of releases to the environment, and to identify the need for further investigation and characterization of the extent of any contamination encountered. The Field Variance process will be used at the time of such field investigations to expedite characterization.

SPECIFIC COMMENTS

COMMENT NO. 1

Section 2.3.4; Explain the criteria to sample the paint and soil from Buildings 304, 500, and 906. Are these buildings representative of the years in which building were painted at Hunters Point or were they randomly chosen?

RESPONSE TO COMMENT NO. 1

The exact years that potential metal-containing paint was applied at HPA are unknown. It is reasonable to assume that most buildings may have been painted several times since their construction. Proposed samples for metal analysis at Buildings 304, 500, and 906 were chosen because paint was observed peeling off walls, or laying on floors or soil. These buildings may be considered "worst case" examples. If metals are detected in these proposed samples, a more extensive paint or coatings sampling program may be appropriate. Section 2.3.4 has been modified to describe why these buildings were chosen for sampling.

COMMENT NO. 2

Section 3.2; Please list the actual analysis method for clarification instead of just "CLP chemicals". In addition, field turbidity analyses should be taken.

RESPONSE TO COMMENT NO. 2

The Draft Final Work Plan has been modified to include EPA approved analytical method numbers and to include field turbidity measurements for groundwater samples.

COMMENT NO. 3

Section 4.4; In the past, delays have resulted from hollow stem auger refusals in certain areas of the site. Include provisions for the use of mud or air rotary rigs if drilling is planned in areas with similar geology. Based on recent data results radioactive screening is recommended.

RESPONSE TO COMMENT NO. 3

Hollow stem auger refusal has occurred in the past primarily as a result of encountering boulders used as fill material. According to HLA geologists, refusal has occurred in or near IR-1, IR-2, IR-3, IR-8, IR-9, IR-12, IR-14, and IR-15. Predictions as to where auger refusal may occur in PA areas cannot be made with certainty; however, areas which are near these IR sites and thus with the potential for encountering auger refusal include PA-33, PA-37, PA-38, PA-44, and PA-53. In these areas, air percussion drilling methods have been employed and have proven effective in penetrating the boulders. Soil samples are being screened in the field for radioactivity by HLA and again by PRC prior to delivery to the analytical laboratory. The Draft Final Work Plan has been modified to include use of air percussion drilling methods if hollow stem auger refusals are encountered. In areas where use or disposal of radiological materials is suspected, soil samples will be screened in the field for radioactivity.

COMMENT NO. 4

Section 5.0; Add to this section the provision for a risk analysis for each PA site if "no further action" is recommended.

RESPONSE TO COMMENT NO. 4

A statement that risk assessment techniques will be used to support any recommendation for no further section has been added to Section 5.0.

COMMENT NO. 5

PA 23, Building 146; It is not clear whether sampling is proposed for the area under the floor plates in the northwest side of the building. Is boring PA23SS05 proposed to cover this?

RESPONSE TO COMMENT NO. 5

Sample PA23SS05 is intended to be collected beneath a heavily stained area on the pavement at the northwest exterior of the building. There are no samples proposed near or beneath the floor plates; the plates may cover a utility vault, crawl space, or solid concrete floor which has no association with a hazardous material. The Draft Final Work Plan has been modified to state that samples will be collected beneath the plate if warranted and to clarify the intent of PA23SS05.

COMMENT NO. 6

PA 23, Building 162; Include the results of the confirmation sampling.

RESPONSE TO COMMENT NO. 6

Based on review of aerial photographs, Building 162, which appears to be a small, round, dome-shaped shed or tank, was demolished or removed between 1969 and 1972. The foundation remained in place until approximately 1981. There are apparently no confirmation sampling results for any soil removed with the foundation.

COMMENT NO. 7

PA 26, Area XIV; PA26AS08 should also be analyzed for other constituents in addition to asbestos.

RESPONSE TO COMMENT NO. 7

A white fibrous material similar in appearance to asbestos was observed in Area XIV; this material is recommended for sampling as designated by PA26AS08. The intent of sampling and analyzing this material is only to verify the presence of asbestos. Indications of other hazardous constituents were not observed and the presence of materials other than asbestos is not expected; therefore, analysis for constituents other than asbestos is not proposed.

COMMENT NO. 8

PA 28, Building 271; Radioactivity monitoring is recommended for these samples.

RESPONSE TO COMMENT NO. 8

Section 3.2 of the Draft Final Work Plan has been modified to include radioactivity screening of samples prior to shipment to the laboratory.

COMMENT NO. 9

PA 29, Buildings 241 and 275; PA 34, Building 304; PA 37, Building 401; PA 55, Building 307: It is essential that the Navy ensure that current occupants of Hunters Point are not adding to the contamination problems with their current hazardous waste handling procedures.

RESPONSE TO COMMENT NO. 9

Housekeeping and waste handling practices of HPA tenants are a continuing concern of the Navy. Instances of possible poor practice brought to the Navy's attention are investigated by Navy personnel; appropriate follow-up actions are taken to address identified problems.

COMMENT NO. 10

PA 29, Area bounded by Nimitz, Blandy and "C" Streets; PA 33, Building 304: Explain how sampling from earlier sampling will be tied into the current PA/SI investigations.

RESPONSE TO COMMENT NO. 10

Results from soil samples collected and analyzed around the perimeter of the tank closed in place at PA-29, Area bounded by Nimitz, Blandy, and "C" Streets, indicated relatively low levels of compounds including TPH, PCBs, lead, and SOCs. This data will be correlated with data obtained during this work plan to evaluate whether migration of these contaminants has occurred.

By request of regulatory agencies, no source control or sampling has been performed in or near the tank removal excavation in PA-33 near Building 304. If samples are collected in association with this tank removal, the results will be correlated with data obtained as part of SI activities to evaluate the nature and extent of potential contaminants in these areas.

UST removal data can be found in the following PRC report: *Naval Station Treasure Island, Hunters Point Annex, San Francisco, California, Internal Draft Summary Report, Contract Task Order 0130, May 6, 1992.*

COMMENT NO. 11

PA 33, Building 364; PA 38, Buildings 506, 507, 509, 510; PA 42, Building 113: Have these buildings been incorporated into the radioactive survey?

RESPONSE TO COMMENT NO. 11

PRC is currently performing radiation monitoring activities at HPA. Although these buildings are demolished, their foundations are present. The areas where these buildings once stood are scheduled for monitoring as part of Phase II Radiation Study.

COMMENT NO. 12

PA 40, Pier 2; It is stated in text that utility lines under the pier may pose an environmental threat to the Bay water. Please explain how this will be addressed?

RESPONSE TO COMMENT NO. 12

Assessment of utility lines is addressed in Volume I of III of this Work Plan. Although Pier 2 was not directly addressed in Volume I of III, there is apparently no evidence that pipelines that transported fluids other than water exist beneath Pier 2. Inspection and sampling of steam lines in the vicinity of Pier 2 will be performed as part of implementation of Volume I of III.

COMMENT NO. 13

PA 41, Building 818; Samples should be analyzed for VOCs, SVOCs and metals in cases there was some chemical storage.

RESPONSE TO COMMENT NO. 13

An earlier version of the HPA site map incorrectly showed the locations of Buildings 816 and 818; these buildings are now correctly labeled in the base map. Because Building 818 was a chlorination plant, storage of chlorine cylinders is suspected. Chlorine is a gas under ambient conditions and would dissipate rapidly if released. There is no evidence or history suggesting storage of other chemicals at Building 818; therefore, sampling and analysis for VOCs, SOCs or metals is not proposed.

COMMENT NO. 14

PA 43, Building 906; One sample from one location outside the shed will not adequately confirm/disprove the presence of chemicals. In light of the expressed interest in Parcel A, this site should be investigated more thoroughly at this time.

RESPONSE TO COMMENT NO. 14

The revised plates submitted May 5, 1992 indicate that a four-point soil composite sample be collected around the building; a soil boring be drilled and sampled in the bare-soil mixing area. Soil samples will be analyzed for a full suite of analytes plus organochlorine pesticides.

COMMENT NO. 15

PAs 52 and 56, RR Right of Way; It is not clear why only these sampling locations were chosen. It is customary to sample extensively adjacent to RR lines due to the likelihood of contamination connected with past disposal practices.

RESPONSE TO COMMENT NO. 15

Sample locations in PA-52 were selected based on observations of oil or paint staining on railroad ties and bedding gravel. Sample locations in PA-56 were selected randomly because no obvious releases to the ground surface were observed.

There is a stretch of track between PA-52 and PA-56 which is not in a designated PA area, and is behind a fence. No loading or unloading of rail cars is suspected to have occurred here. No stains or other evidence of release or disposal along the track were observed. For these reasons, no sampling is proposed on this stretch of track.

COMMENT NO. 16

PA 55, Building 307; Contingency planning should be included in the case that subsurface vaults are discovered.

RESPONSE TO COMMENT NO. 16

Sampling and analysis may be recommended based on findings of the geophysical investigation. The Draft Final Work Plan has been modified to include this possibility.

NAVY RESPONSES TO RWQCB COMMENTS

The following are the Navy's responses to comments made by the California Regional Water Quality Control Board San Francisco Bay Region (RWQCB) on the *Site Inspection Work Plan: PA Other Areas/Utilities, Volume III of III; 26 Sites, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.* The RWQCB presented their comments in a letter to the Navy dated May 20, 1992.

COMMENT NO. 1

Samples suspected of containing sand blast materials should be prescreened for radioactivity before placement in sample containers.

RESPONSE TO COMMENT NO. 1

Section 3.2 of the Draft Final Work Plan states that all samples from areas where radiological materials may have been used or disposed will be screened for radioactivity. All sandblast waste will be screened for radioactivity.

COMMENT NO. 2

In addition to temperature, pH, and conductivity, turbidity measurements should be made in the field.

RESPONSE TO COMMENT NO. 2

The Draft Final Work Plan includes turbidity measurements of groundwater samples.

COMMENT NO. 3

A maximum screen length of 15 feet for monitoring wells is recommended.

RESPONSE TO COMMENT NO. 3

In general, monitoring well screened intervals are selected based on an interpretation of the vertical extent of aquifer units at a particular site. The interpretation is based on available and relevant geologic and hydrogeologic information including:

- site-specific lithology and stratigraphy
- thickness and continuity of low-permeability units that may act as aquitards
- evidence of vertical gradients
- observed and estimated saturated thickness of identified aquifer units

Monitoring wells are typically fully screened across identified aquifer units. Wells are not screened to cross-connect multiple aquifer units. Monitoring of aquifer units focuses data collection on the most permeable lithologies, which in turn constitute preferential groundwater flow paths.

Screened intervals for proposed monitoring wells will be designed to collect representative groundwater samples from the uppermost aquifer unit.

COMMENT NO. 4

The holding time for CLP analyses may, technically, be calculated from the date on which the sample was received in the laboratory. However, there is some concern that extended periods between sample collections and delivery to the analytical laboratory may jeopardize the integrity of samples. What is the maximum holding time between sample acquisition and delivery to the analytical laboratory for organic analyses? How and where will that holding time be reported?

RESPONSE TO COMMENT NO. 4

Holding time for samples will start at the time the sample is collected. The laboratory will recognize the time recorded on the Chain of Custody forms as the beginning of the holding time. Samples are routinely picked up daily for delivery to the laboratory.

COMMENT NO. 5

The investigative approach presented for Building 818 (Chlorination Plant, Exhibit 41) was modified during a site visit to Hunters Point (May 7, 1992) to include sampling to determine whether chlorine spills may have occurred. What sampling is to be performed at this site?

RESPONSE TO COMMENT NO. 5

Building 818 was previously incorrectly located on the base map (Plate 2). The modification corrected the true location of Building 818. Chlorine is used to kill biological organisms in drinking water; it is not a priority pollutant. Chlorine is a gas under ambient conditions. If a release ever occurred, the impact to soil at the chlorination plant in all likelihood would have been negligible and transient in nature; therefore, no sampling has been recommended.

COMMENT NO. 6

If there is evidence that the oil/water separator behind Building 109 was removed, at least one boring should be performed within the boundaries of its former location to determine if the soils are contaminated.

RESPONSE TO COMMENT NO. 6

A soil boring has been proposed beneath the reservoir behind Building 109.

COMMENT NO. 7

A composite sediment sample from the storm drains near Buildings 408, 409, and 410 is to analyzed. If there is a "hit" in this sample, how will the data be interpreted? It appears from the illustration (Plate PA-44) that the more northerly storm drain access point is somewhat removed from the area of sandblast grit. Perhaps sediment from the more northerly sampling station should be analyzed separately from that taken from the other access plants.

RESPONSE TO COMMENT NO. 7

Sand blast waste was similar in appearance throughout this entire area. If a "hit" resulted, individual samples from the storm drain composite, maintained by the laboratory, could be analyzed. Despite this rationale, the Draft Final Work Plan states that the northernmost sample will be analyzed separately.

COMMENT NO. 8

Groundwater data from monitoring wells near Building 525 (located "approximately 25 feet northwest of the building") should be included in the PA report.

RESPONSE TO COMMENT NO. 8

PA-16 is northwest and adjacent to PA-53 at the southern side of HPA. Prior drum storage at PA-16 prompted soil and groundwater sampling there. Eleven borings and three groundwater monitoring wells were completed and sampled. Analytical results indicated the presence of phenanthrene, fluoranthrene, pyrene, petroleum hydrocarbons as diesel, oil and grease, and metals in soil samples at relatively low concentrations. Analytical results indicated the presence of eleven metals in groundwater. Concentrations were less than Maximum Contaminant Levels (MCLs) for those metals for which MCLs are established. Groundwater data have been included in Exhibit 53.

COMMENT NO. 9

What sampling is to be performed in the subsurface vaults near Building 307 (Electronic Assembly, Machine Shop)?

RESPONSE TO COMMENT NO. 9

Currently, existence of the vaults has not been confirmed. Until the geophysical investigation is performed and the extremities of possible vaults estimated, sampling locations cannot be identified. The Draft Final Work Plan states that samples and analyses will be recommended after the geophysical investigation only if the presence of vaults is suspected.

COMMENT NO. 10

Detection limits for the storm drain sediment samples should conform with those of the Environmental Sampling and Analysis Plan (ESAP) QAPjP so that environmental risk assessments for non-human receptors may be made.

RESPONSE TO NO. 10

Storm drain sediment analyses will be performed to ESAP QAPjP detection limits. Section 3.2 of the Draft Final Work Plan includes a statement that all storm drain sediment and sand blast waste samples will be analyzed to these detection limits.

DISTRIBUTION

DRAFT FINAL
SITE INSPECTION WORK PLAN: PA OTHER AREAS/UTILITIES
VOLUME III of III: 26 SITES
NAVAL STATION, TREASURE ISLAND
HUNTERS POINT ANNEX
SAN FRANCISCO, CALIFORNIA
July 22, 1992

Copy No. 1

		Copy No.
30 copies:	Installation Restoration Branch, Code 1811 Western Division Naval Facilities Engineering Command 900 Commodore Drive, Building 101 San Bruno, California 94066 Attention: Ms. Louise Lew (Code 1811LL)	1-30
2 copies:	PRC Environmental Management Inc. 120 Howard Street, Suite 700 San Francisco, California 94105-1622 Attention: Dr. Gary Welshans	31-32
3 copies:	Harding Lawson Associates	33-35
1 copy:	HLA Master File	36
1 copy:	HLA Corporate Library	37

CNA/DFL/mm/T20282-H

QUALITY CONTROL REVIEWER

Michael L. Siembieda
Associate Geologist